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Legacy - March 2011

South Carolina Institute of Archaeology and Anthropology--University of South Carolina

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Expanding Boundaries of
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Maymester Historical Ecology Field
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ARCHAEOLOGICAL RESEARCH TRUST (ART)

Six Archaeologists Funded by ART for
2011
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TRIBUTE TO EDWARD AND DOROTHY KENDALL FAMILY FOUNDATION

ASSC/ USC Department of
Anthropology—Public Lecture and
37th Annual Conference on South
Carolina Archaeology—April 8-9,
2011 (Page 29)

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Nena Powell Rice, Editor, (nrice@sc.edu)



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ARTS & SCIENCES
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Legacy

South Carolina Institute of Archaeology and Anthropology

SCIAA Awarded Collections Grant

By Charles Cobb

SCIAA has just received a major collections award in the amount of \$192,000 from a National Park Service program known as "Save America's Treasures." Sharon Pekrul, Jonathan Leader, and myself are the Principal Investigators on the grant, which will go toward rehabilitating and stabilizing archaeological collections from slave cabin contexts at the Yaughan and Curriboo plantations in the Lowcountry.

These collections, dating from fieldwork in 1979, encompass a large sample of enslaved African and African-American households encompassing a period from about 1740 to 1826. They are nationally recognized as containing some of earliest dated excavated slave house contexts in the Carolinas, and for spanning a critical period of transformation in the Southern economy from colonial to antebellum times. Studies based on these materials were pivotal in historical archaeology for shifting the emphasis away from the "Big House" and toward the everyday lives of slaves.

Importantly, these collections hold considerable promise of addressing new



Colonoware pots from the Yaughan and Curriboo plantations.
(SCIAA photo)

research questions concerning slavery that have emerged over the 30 years since the archaeological work was originally conducted. Thus, our collaborative partner in the project, The Digital Archaeological Archive of Comparative Slavery (DAACS; www.daacs.org), will re-analyze the data and make it freely available to the public. DAACS currently provides highly standardized artifact, contextual, and spatial data from over 40 excavated slave quarter sites throughout the Chesapeake, South Carolina, and the Caribbean.

In our partnership with DAACS to curate and analyze the collections to modern standards, a new generation of Americans will be able to significantly advance our historical understanding of slavery in South Carolina and its relationship to slave societies throughout the Atlantic World.

Director's Note

By Charles Cobb
SCIAA Director

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Charles Cobb, Director
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University of South Carolina
SC Institute of Archaeology and Anthropology
1321 Pendleton Street
Columbia, SC 29208
(803) 777-8170 (For Staff Directory)
(803) 576-6573 (Nena Rice)
(803) 254-1338, FAX
<http://www.cla.sc.edu/sciaa> (SCIAA Website)
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The allotment of land conferred to the Lords Proprietors comprising the Carolina colony, and that eventually would become the state of South Carolina, was very large indeed. Charters drawn up in the 1660s delineated a grand tract that today would include parts of North Carolina, Georgia, and Florida, and somewhat ambitiously set the western boundary at the Pacific Ocean. There were some complicating boundary issues as a result of the original demarcation of the Carolina colony: the Virginia colony to the north had their own, overlapping, notions of where their southerly influence should lay; Spanish Florida had already laid claim to much of this land over a century previously; and one can be fairly certain that Native American groups already living in the region had not been consulted.

My point here is that the inscribing of borders, as well as whatever political body is defined by those borders, can be very much an arbitrary thing. This has implications for SCIAA because we define our educational and research mission around the entity known as South Carolina. I am occasionally asked why our researchers at times work outside of the state, and my response is that the peoples that have lived in this geographic area have never been content to limit their activities to artificial boundaries—and this was just as true 10,000 years ago as it is today.



Charles Cobb, SCIAA Director (SCIAA photo)

A prime example of the wandering interests of South Carolinians can be found with Al Goodyear's work at the Topper site in Allendale County (see pages 8-15). The Paleoindian occupations documented there date to the end of the last Ice Age when small bands traveled impressive distances in search of food, basic resources, and, one presumes, to meet other humans as well. We can track some of their movements by using physical and chemical analyses to source the geological location of the raw materials used for their stone tools. Some of the stone found at Topper comes from the Asheboro, N.C., region almost 200 miles away...an easy drive in a car but pretty impressive when one considers that families trekked this kind of distance on a regular basis. As a result of this knowledge about their mobility, we know that understanding the people who lived at Topper really means linking the site with contemporary settlements on a multi-state scale.

Moving the clock forward several thousand years, Chester DePratter has been examining the shell heaps along the coast for many years now. These sites built up from the actions of groups seasonally exploiting oysters and clams, who then left the remains of their meals in piles that can tower over the head of the average person. The shell mounds obviously tell us something about past diets, but they are also important indicators of sea-level

and climate change since their location generally corresponds with the movement of ancient shorelines. Although Chester has spent considerable effort documenting these sites in South Carolina, his work on them began on the Georgia coast when he was a graduate student. There is little doubt many of these sites in both states (as well as in Florida and North Carolina) were created by the same groups

as they travelled north and south along the coast. For this reason, Chester has been involved in a decades-long project that examines the larger extent of this settlement system.

Even as Native American groups adopted domesticated plants like maize and began to settle into permanent towns they continued to maintain long-distance exchange ties. Adam King's work along the Savannah River has been dedicated to unraveling some of the impressive interactions among Mississippian groups (AD 1000-1500) across the entire Southeast. One of the findings of Adam and his colleagues in other states is that artistic elements of an influential religious system appear to have originated somewhere around modern-day St. Louis, Missouri, and apparently spread across the South in the AD 1100s and 1200s. Adam along with other archaeologists working in the larger region have discovered extremely strong similarities in mythical figures and cosmological designs depicted in engraved shell pendants, embossed copper plates, and other beautiful objects that are found as far west as Oklahoma and all the way east to the Atlantic Coast.

The arrival of Europeans continued Carolina's tradition of simultaneously looking outward and inward, although not unexpectedly in new and novel ways. The establishment of Charleston in 1670 led to extremely lucrative trade relations between Native Americans and the Colonials. Native Americans from a huge swath throughout the eastern United States set up towns on both sides of the Savannah River to move furs from the interior towards English traders. Christopher Gillam, Chester DePratter, and myself have been examining some of these towns over the past two years, and we have found that this widespread migration led to English and Indian alliances that profoundly influenced the course of American colonialism. For example, the Chickasaw from northern Mississippi were close friends of the English, which did not endear them to French Louisiana, and Carolina's repeated overtures prompted a band of Chickasaw to move to the area

around present-day Aiken and Augusta in 1723. This group maintained strong ties with their homeland, including the westward transport of weapons and strategic information. This helped the Chickasaw to decisively defeat two French forces invading their Mississippi homeland in 1736, and at the same time greatly promoted the influence of Carolina's colonial government all the way to the Mississippi River.

As these examples illustrate, attempting to understand the archaeology and past of South Carolina by only looking inward would be like trying to understand the history of the United States after World War II without considering the Cold War, the Marshall Plan, migration, or the growth of multi-national corporations.

On a not unrelated note, I take some pride in the worldwide recognition of, and demand for, the talents resident at SCIAA. Jon Leader's skills in conservation have been called upon in the United Kingdom, Mongolia, the Republic of the Congo, and elsewhere. Three times in the last decade Chris Amer's maritime division has assisted federal archaeologists in Mexico

together scholars worldwide to carry out comparative research on prehistoric cultures around the Pacific Rim.

In a recent and exciting development, SCIAA has been playing a role in an effort by USC, three other universities, and the National Park Service, to develop a teaching and research campus in St. Croix, Virgin Islands. The focus of this effort is Salt River Bay National Historical Park, which has archaeological sites that include some of the first settlements on the island, a village encountered by Columbus on his second expedition, and numerous remains related to the colonial period. Scholar-in-residence David Goldstein will be leading an archaeological and ecological field school at St. Croix this upcoming May 2011 (see pages 24-27). This research relies strongly on David's expertise in historical ecology, as well as a long tradition of colonial research at SCIAA. As a side-note, we made a visit to St. Croix last summer and were given a tour of an impressive colonial plantation house built in the 1730s during the French occupation of the island. As I was admiring the beautiful plank

floors in the kitchen, the homeowner informed me they were made of heart-of-pine from South Carolina! Even at that early date, lumber exports had become an important part of the economy. We are now interested in how extensive this trade was throughout the Caribbean.

Although globalization is frequently

considered a recent phenomenon, the reality is that the expansive ties that bind us today have millennia-old roots. I believe that the work carried out by SCIAA plays an important role in exploring the nature and impacts of South Carolina's role in the larger world around us.



INAH survey vessel prepares to depart out of Veracruz Harbor, Mexico. (SCIAA photo)

with operating underwater remote sensing equipment on projects in that country. Because of his computer cartography expertise, Chris Gillam (see pages 22-23) is currently a key collaborator on the NeoMap project, a Japanese supervised archaeological consortium that has pulled

Scholar Conference

“Moving the Middle to the Foreground: Re-Visiting the Second Epidemiological Transition”

April 18th-19th 2011—Inn at USC—Hosted by the South Carolina Institute of Archaeology and Anthropology and the Department of Anthropology at the University of South Carolina

Attendance by all interested individuals is strongly encouraged, and admission is free to the public

By Molly K Zuckerman

Introduction

According to demographers, anthropologists, and medical geographers, human populations around the world have experienced three major shifts in levels of population growth and rates of death and illness throughout history (Barrett et al. 1998). The first occurred with the Neolithic Revolution, the beginning of agriculture and sedentary living, approximately 8,000 to 5,000 years B.C. There was a dramatic increase in population density, fertility, and mortality, or rates of death, from infectious “childhood” diseases, such as influenza, whooping cough, and smallpox. In the second, the resulting increases in life expectancy caused a switch to higher mortality and morbidity, or illness, from “man-made” diseases or “diseases of civilization”—chronic conditions, like cancer and cardiovascular disease, rather than infectious. This occurred simultaneously with the rise of modern, industrial, urban environments throughout Europe, Asia, and America in the 19th and 20th centuries. The third transition, which is ongoing, involves the rise of emerging and re-emerging infectious diseases, like HIV / AIDS, Lyme Disease, and Ebola, in the late 20th and early 21st centuries.

The second transition, which roughly coincided with the Industrial Revolution in England and America, was one of the greatest social and environmental transformations in human history (Armstrong et al. 2005). It represented the advent of modern environments as well as modern patterns of diet and



Molly Zuckerman defending her PhD dissertation at Emory University. (Photo courtesy of Derek Anderson)

exercise levels. When combined with longer life expectancies, these resulted in increased mortality and morbidity from ‘diseases of civilization’—the chronic and degenerative diseases that increasingly plague the developed world—especially in South Carolina (CDC 2010). As such, improving our understanding of how the cause(s), timing, nature, and effects of the transition varied between regions and communities can provide critical insight into relationships between economic growth, environmental quality, and human health. These issues are key to current debates both on these relationships and on allocating public health funds in developed and developing

countries (Colgrove 2002). Scholars who are increasingly aware of understanding how social, economic, and environmental factors affected health in the past, generate critical insight into the same processes in the present and future (Armstrong et al. 2005; Morens et al. 2004).

However, in contrast to the first (Cohen and Armstrong 1984; Steckel and Rose 2002) and third transitions (Barrett, 1998 #1000; Farmer, 1996 #3906), the causes and consequences of the second transition remain poorly understood and highly controversial. This is primarily because evidence used in studies of the transition—census and vital records (e.g., death records)—are incomplete and only

exist for certain areas (McKeown 2009). Inadequate evidence has even led to a rethinking of the widely held view that modern environments are bad for human health; for example, Gage (2005) has argued that the observed rise in chronic disease is merely due to improvements over time in reporting the cause of death.

The 2011 Postdoctoral Fellows Conference, "Moving the Middle to the Forefront: Re-Visiting the Second Epidemiological Transition," will address the causes and consequences of the second transition through presentations of research that use an interdisciplinary integration of skeletal, archaeological, biochemical, and historical evidence. A critical interrogation and integration of these lines of evidence can be used to detect biases, nonconformities, and incompleteness in these materials, define new research questions, and generate more information than is available from the separate consideration of these sources (Buikstra et al. 2000; Swedlund and Herring 2003). Most importantly, it can also be used to illuminate experiences that affect individual human biologies—related to gender, socioeconomic status, life expectancy, social inequality, and local ecology, e.g., community environment—that are invisible or altered in archaeological or historical evidence (Perry 2007). Skeletal evidence has been sorely underutilized in debates about the second transition. Therefore, the goal of this conference is to convene an international set of leading researchers to present upon innovative methods and types of evidence for studying patterns of human health in the past, and discuss how these might be fruitfully applied—across disciplines—to improve our still poor understanding of the second epidemiological transition. Presentations at the conference will demonstrate the use of skeletal, cemetery, archaeological, historical, demographic, and environmental evidence to study the history of health and the effect of environmental change on health in order to move past the limits set by census and vital records. Researchers will address critiques of the concept of

epidemiological transitions, asking: Is this concept a useful way to understand and study large-scale changes in health that have different effects within different communities? They will also present research that moves towards filling gaps in our knowledge of the transition, such as: How did it affect groups of people who are underrepresented in historical evidence, like women, children, and the poor? Researchers will focus on case studies of both individual communities and entire nations to ask: What were the extent of differences in the causes, timing, and effects of the transition between different areas? This will also expand our knowledge of the transition outside of the traditional, restricted focus on Britain and America. Researchers will also highlight areas of innovative new research, such as: What role have industrial pollutants and environmental contamination had in the global rise of cancer, allergy, and asthma?

Background

Postdoctoral Fellows conferences are held annually, sponsored by the South Carolina Institute of Archaeology and Anthropology and the Department of Anthropology at the University of South Carolina. They are intended to attract leading international scholars to present papers and engage in stimulating discussion sessions on topics of current public, anthropological, and archaeological interest. Previous conferences have addressed "The Archaeology of the Recent African American Past" (2009), focusing on archaeological approaches to the history of African American diasporic communities, and in "From Field To Table: Historical Ecology of Regional Subsistence Strategies" (2010), ways of reporting and reconstructing the impact of human subsistence on different ecosystems throughout history. An important part of the conference this year is assembling scholars from diverse disciplines to present their methods and approaches for studying changes in health in the past. They will further discuss how these can be fruitfully employed across disciplines—types of data and ways of knowing, time

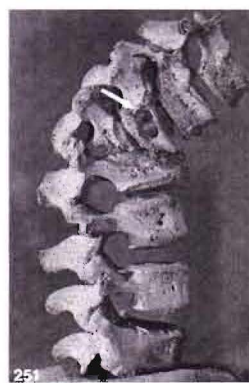
periods, societies, and places—in an attempt to stimulate innovative new ways of studying the second transition. As such, another important part of the conference is facilitating audience involvement, understanding, and contribution. Presentations at the conference are specifically designed to be amenable and interesting to audience members from a wide range of backgrounds, from members of the public who are interested in anthropology, archaeology, and the history of human health, to undergraduate students from any major, to professional scholars. The conference is structured as a series of 20-minute presentations, each followed by 10 minutes of discussion, in which all attendees are strongly encouraged to participate. The 2011 Postdoctoral Scholar-in-Residence Conference will be held at the Inn at USC and attendance by all interested individuals is strongly encouraged. Admission to the conference is free.

Presenters include both young and established scholars, including students, and come from diverse backgrounds. Excitingly, much of the research presented at the conference will highlight specialties of the USC community as well as facilitating new collaborations between USC and other institutions, both in the United States and other countries. For example, USC's School of Public Health is a global leader in studying the effects of environmental pollution on health, but this has yet to be examined for the second transition. As such, Dr. Robert McKeown, Chair of Epidemiology at USC, will present the introductory address to the conference, providing background on the second epidemiological transition and critiques of the concept. Dr. Michelle Harmon, from USC Aiken, will present her work on 'indicator' microorganisms, or microorganisms whose presence in water and sediments indicates the presence of specific industrial toxins, like mercury and lead, and the effects that these have on human health. Dr. Harmon will also highlight how these could be used to detect evidence of pollution in soils at 19th and 20th-century archaeological sites. In

complement to this, Dr. Andrew Millard, from Durham University, UK, will discuss how traces of toxins and pollutants absorbed into human tissue (i.e., bones and teeth) from the environment can be used to measure people's exposure to industrial pollution created by industrialization in the 19th and 20th centuries. Exploring other aspects of environmental quality, Dr. George Armelagos, from Emory University, one of the Keynote Speakers at the conference, will situate the transition within an evolutionary context with a presentation on the controversial 'hygiene hypothesis.' This hypothesis argues that the extreme cleanliness of many modern environments, which lack many of the microorganisms (e.g., bacteria, intestinal parasites) that characterized past human environments, has tipped many of us towards immune dysregulation, or unrestrained and unregulated immune responses. This, in turn, has resulted in the contemporary explosion of rates of allergy, asthma, and autoimmune disease. As to methods for testing this controversial idea, Dr. Karl Reinhard, of the University of Nebraska, Lincoln, who is the world's foremost expert on the history of parasites, will present on methods for detecting microorganisms at archaeological sites. These combined presentations are intended to inspire and enable future researchers to gauge how levels of parasites and 'cleanliness' have varied over time and assess how these changes relate to differences in rates of immune dysregulatory conditions, like asthma, over time.

Researchers will also present on the health experiences of marginalized groups during the second transition as well as events that occurred as part of the second transition and had a lasting effect on human health. For example, Dr. Carlina de la Cova, University of North Carolina, Greensboro, will present upon the effects of industrialization, increased urbanization, and in-migration, including the Great Migration, during the 19th century upon lower class African American and Euro-American men. Her research will examine evidence for racial,

cultural, and ethnic differences in their experiences of health and disease. Dr. Megan Perry, Eastern Carolina University, will present on how we can identify the effects of the second transition on the health and life expectancy of children and infants, whose experiences are largely absent from historical and archaeological evidence. Ms. Kara Hollaway, University of Adelaide, will discuss differences over time in the prevalence of tuberculosis in Europe, which was one of the primary killers during industrialization and the growth of urban areas in the 19th and 20th centuries. Dr. Karen Slonim, University of Missouri, will discuss the use of different kinds of historical records to recreate experiences of the 1918 Spanish Flu Epidemic, which killed approximately 50 million people worldwide, throughout urban and rural communities in Canada. These presentations represent only a sampling of the research that will be presented and discussed at the conference.



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Vertebra showing signs of tuberculosis. (Photo by Molly Zuckerman)

Conclusion

The 2011 Postdoctoral Scholar-in-Residence Conference has been organized to promote scholarly dialogue and the integration of methods and perspectives from different disciplines in order to generate new knowledge and modes of inquiry. It is also intended to communicate current perspectives on demonstrating the effects of environmental change on human health to a wider audience, including that of the University of South Carolina and other academic institutions throughout the southeastern United States, and non-academic communities throughout South Carolina and surrounding states. In order

to achieve this goal, this conference will be widely advertised throughout these communities. In addition, the conference's tangible product will be an edited volume, published by the University of South Carolina Press, which will incorporate the presentations delivered at the conference. It will disseminate the conference's findings to a national and international scholarly and public audience. It is hoped that this volume will encourage scholars in diverse fields to incorporate outside perspectives and methods into their work, thus generating innovative, interdisciplinary work on the second epidemiological transition. From the perspective of the USC Press and SCIAA, we hope to continue the dialogue about interdisciplinary approaches to the study of past health, making South Carolina an intellectual hotspot for future conferences and publications in anthropology and archaeology.

For additional information on attending the conference, the schedule of events, and a complete list of presenters, abstracts, and paper titles, please see: <http://www.cas.sc.edu/sciaa/SCIAA-Conference/index.html>.

Acknowledgements

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For additional information, please contact:

Molly Zuckerman, Ph.D.
University of South Carolina

South Carolina Institute of Archaeology and Anthropology
1321 Pendleton Street
Columbia SC 29208
(803) 576-6572 (Office)
(803) 254-1338 (FAX)
Zuckermm@mailbox.sc.edu

Bruker AXS Conducts an Interactive Workshop in Handheld XRF Spectrometry at SCIAA

By Molly K. Zuckerman

On January 12th and 13th, 2011, the South Carolina Institute of Archaeology and Anthropology (SCIAA) hosted an interactive workshop on handheld X-Ray Fluorescence (XRF) Spectrometry, sponsored by SCIAA and the Department of Anthropology, University of South Carolina. The workshop was conducted by Dr. Michael Rider, an analytical chemist and representative for Bruker AXS Handheld, and used Bruker AXS handheld technologies. The workshop was attended by graduate students and faculty from the Department of Anthropology as well as faculty from the Department of Geological Sciences. Faculty also attended from the Department of Anthropology and Sociology at Clemson University.

XRF is a non-destructive tool for conducting trace element analyses of any non-living organic and non-organic materials. It works by detecting the specific characteristic emissions of "secondary" (or fluorescent) X-rays from a sample material that has been excited by being bombarded with high-energy X-rays (gamma rays). This allows detection of the type and concentration of a great range of elements—in the upper ppb (parts per million) and lower ppm (parts per million) range—in a large range of materials without requiring any destruction or modification of the material (unlike ICP-MS and AAS techniques for trace element analysis). This technology is widely used for elemental analysis and chemical analysis, particularly in the investigation of metals, glass, lithics, ceramics, building materials, and other materials commonly found at archaeological sites. As such, it is becoming a highly popular, cutting edge

technology for research in art curation, museum studies, geochemistry, and archaeology.

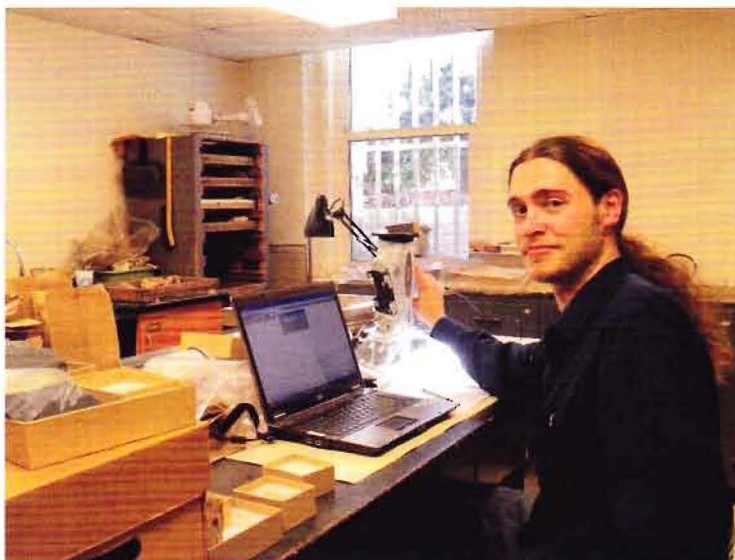
Bruker AXS sponsors and conducts workshops throughout the world to demonstrate the utility of handheld XRF for archaeologists, geochemists, and museum curators. Dr. Rider was invited to perform the workshop at SCIAA because staff at SCIAA and faculty and graduate students in the Department of Anthropology believe that an XRF system would make a tremendous contribution to archaeological and anthropological

XRF system has been generously loaned to SCIAA for a period of time—the XRF system has already been applied to several existing research projects. For example, Derek Anderson and Dr. Al Goodyear have used the XRF to geographically source lithic materials from Clovis and Archaic components recovered from the Topper site, Allendale SC. Dr. Steve Smith has used the system to assess whether differences exist in the elements present in lead musketballs from Revolutionary War battleground sites in an attempt to detect where the lead was sourced.

Finding evidence of such differences would allow him to better reconstruct evidence of military tactics and the exact location of American vrs. British soldiers during conflicts at excavated battleground sites. A PhD student in the USC Department of Anthropology, William Stevens, has also used the XRF system in a research project. Bill has used it to take trace element profiles from the skeletons of African American slaves from a cemetery on the Hagley Plantation, Pawley's Island, SC. He will use this data as part of his dissertation,

which explores the effect of rice agriculture on the health of African American slaves in antebellum South Carolina. Students, staff, and faculty expect that these projects are only the tip of the proverbial iceberg in terms of using handheld XRF technology to expand our knowledge of the archaeology and history of South Carolina.

Employees of SCIAA will be writing grants this spring in the hopes of securing a handheld XRF unit for use by employees of SCIAA as well as faculty, and undergraduate and graduate students in the Department of Anthropology. Private donations would also be welcome to facilitate purchasing one of these systems.



Derek Anderson using the X-Ray Fluorescence (XRF) on University of North Carolina-Chapel Hill collections. (Photo courtesy of Derek Anderson)

research in South Carolina. Bruker manufactures a handheld model that is suitable for both field work—it is hardy, highly portable, and equipped with long-life batteries, and a palm pilot for mobile data collection—as well as laboratory use—it can be converted to a table top unit, which collects data through a PC laptop. As such, an XRF system could be employed for both field research and later, during lab-based analysis of materials from these excavations as well as for analysis of existing collections at SCIAA.

During the workshop, as well as during the weeks preceding and following the workshop—as a Bruker AXS handheld

Research

The 2010 Activities of the Southeastern Paleoamerican Survey

By Albert C. Goodyear

While the Southeastern Paleoamerican Survey (SEPAS) is perhaps best known for its work at the Topper site each summer with the Allendale Paleoamerican Expedition, in fact, this is only one of several important research functions conducted throughout the year. As noted previously in *Legacy* (Goodyear 2006), the Survey also maintains the S.C. Paleo Point Data Base, conducts artifact mapping, maintains the Southeastern U.S. lithic raw material inventory, and conducts Southeastern U.S. quaternary studies. Progress was made in 2010 in all of these areas of research.

In terms of artifact mapping, a new database was created devoted to worked

18 blades, all of Allendale-type chert, have been recorded in the Coastal Plain counties of Georgia and South Carolina. So far such large blades are only known to be associated with Clovis. Their edges have been modified by pressure retouch into knives, scrapers, and graver spurs (Fig. 1). Some blades have two or more worked edges indicating they were probably maintained and reused at more than one site.

The S.C. Paleo Point Data Base saw several new examples added in 2010. A total of 26 new points were recorded, 14 alone by Tommy Charles from the Watson collection donated to the Cayce Museum. At the end of 2010, the database had 571 points. The S.C. Paleo Point Data Base is now 40 years old and ripe for pattern recognition and possible cultural interpretations.

One obvious pattern is the dominance of metavolcanic raw materials in the northern and eastern part of South Carolina. Fig. 2 is a map prepared in 2005 by Robert Allison of the SAS

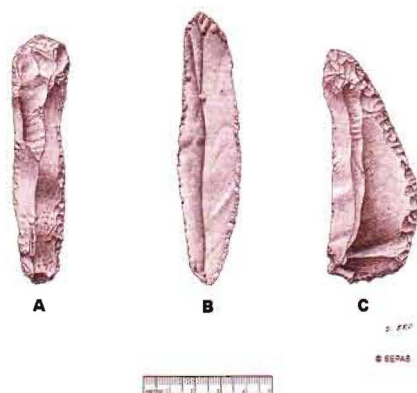


Fig. 1: Examples of Clovis macroblades from surface sites in Georgia and South Carolina with technological modifications. (SEPAS, Darby Erd)

prismatic blades thought to be Clovis in origin. Based on the extensive work with Clovis macroblades at Topper (Sain 2010) and nearby Big Pine Tree site (Sain and Goodyear 2011), blades are known to be a major part of Clovis manufacturing activities at these quarries. At these sites, however, a relatively small number were worked into tools, especially at Topper, prompting a search for technologically modified blades from sites elsewhere in South Carolina and Georgia. To date,

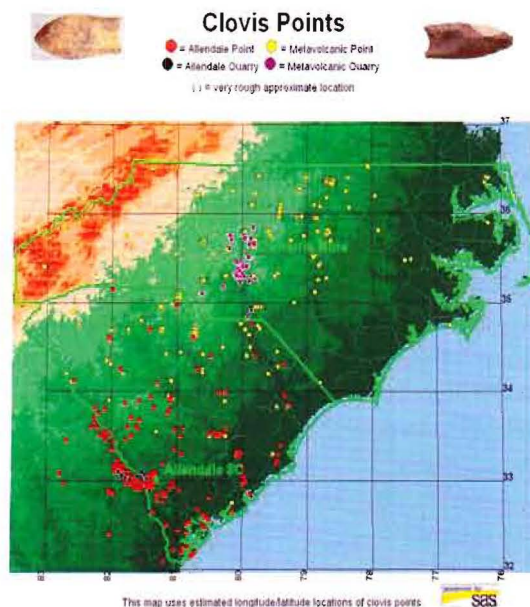


Fig. 2: Map of Clovis points made of Allendale type Coastal Plain Chert and metavolcanic toolstone as distributed over North and South Carolina. (SAS Institute, Robert Allison)

Institute, which shows two basic patterns of Clovis points by raw material, Coastal Plain chert in southern South Carolina and metavolcanic points dominating in North Carolina and northern South Carolina. Metavolcanic lithic materials occur as bedrock in the Piedmont province and prehistoric quarries are known for both S.C. (Benson 2007) and N.C. (Steponaitis

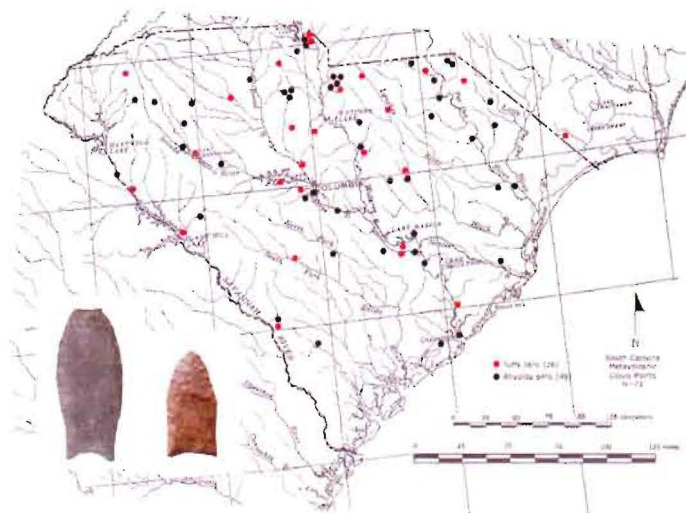


Fig. 3: Distribution of metavolcanic Clovis Points in South Carolina as of 2009. (SEPAS photo)

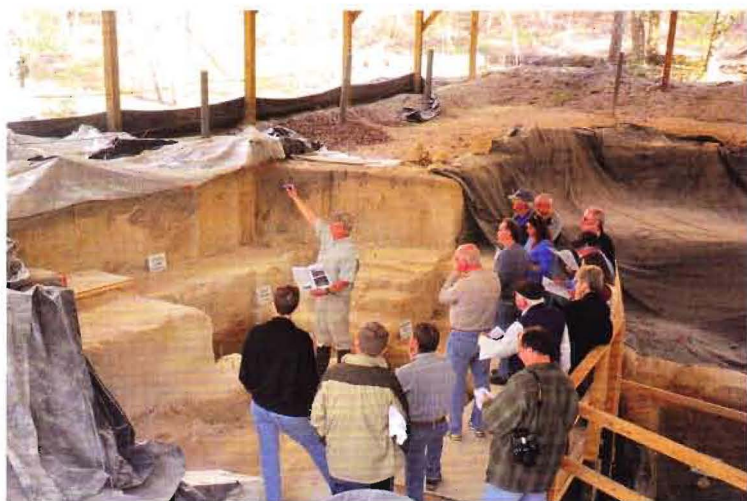


Fig. 4: Tour of the Topper site February 21, 2010 with the Advisory Board of the Center for Study of First Americans, Texas A&M University. (SEPAS photo by Doug Sain)

et al. 2006). Recent prospecting by Sean Taylor of the S.C. Department of Natural Resources in the Pee Dee River of S.C. has also revealed cobbles of toolstone quality rhyolites, which were fluvially transported downstream from N.C.

Fig. 3 shows the geographic distribution of metavolcanic Clovis points in South Carolina as of 2009. One favorite raw material for fluted point makers is what we have called welded vitric tuff, or "tuff" (Novick 1978). It is so fine-grained it has sometimes been confused with chert. In S.C. about 36% of the metavolcanic Clovis points are made from tuff as opposed to nearly 90% of the Redstone points (Goodyear 2010). Because of the emphasis on long narrow flutes, Redstones may have required the finer grained materials such as tuff and Coastal Plain chert. Outcrops of tuff are thus far only known for the Uwharrie Mountain region of North Carolina implying that some long distance mobility and/or exchange was involved in their importation in South Carolina. Such materials have shown up in the Clovis floors of the Topper site located on the Savannah River (Goodyear et al. 2009).

Sourcing studies of lithic raw materials used as toolstone in S.C. and adjacent states is also an integral part of raw material identification and artifact mapping. Until recently, little progress has been made in the S.C. metavolcanics in terms of petrography and geochemistry. In N.C., good progress has been made

using a variety of techniques such as x-ray fluorescence (XRF) spectrometry and neodymium-isotope analysis (Steponaitis et al. 2006). Similar methods are currently being applied in a study of S.C. metavolcanic quarries by

Mark Brooks and Christopher Moore. Using petrographic descriptions of thin sections by Dr. Gene Yogodinski of USC's Department of Earth and Ocean Sciences, Christopher Young has recently undertaken an evaluation of lithic raw materials using prehistoric metavolcanic artifacts from the Kolb site (38DA75) and metavolcanic cobbles obtained from the nearby Pee Dee River (Young 2010). In the fall, SCIAA researchers also had access to a hand held Bruker Tracer III-V XRF unit made possible by a loan to Dr. Molly Zuckerman from Bruker Analytical. With this machine, Derek Anderson was able to scan several S.C. metavolcanic artifacts as well as N.C. quarry samples. In late 2010, Young and Goodyear received a grant

from SCIAA's Archaeological Research Trust Board to continue sourcing studies of the Kolb site and the fine-grained material we have called tuff in S.C. A field trip was made in January 2011 to the Asheboro area of N.C. to collect raw material samples from the so-called tuff outcrops known there. Using neodymium-isotope and XRF analysis, tuffs from N.C. sources will be compared with tuff artifacts found in S.C. to evaluate their similarities.

One serendipitous discovery reported to us in 2009 was the fact that certain metavolcanic artifacts respond to a magnet. Mike Stephens, a resident of Columbia, brought his father's artifact collection to SCIAA, which had been made in the 1950's from family land near Effingham, S.C. Stephens wondered if any of his artifacts would show attraction to a magnet. In fact, some of the metavolcanic bifaces obviously did. When Mr. Stephens demonstrated this to Keith Derting and myself, we were shocked to put it mildly. Since that time numerous metavolcanic artifacts have tested positively (Fig. 12) with the same magnet used by Smith, which he obtained from an office supply store. The possibility exists that certain metavolcanic sources may be magnetic and as such might be an inexpensive way of detecting sources. The rhyolite quarries in the western Piedmont of S.C. on U.S. Forest Service land in Edgefield



Fig. 5: University of Tennessee undergraduate participants in the March 2010 dig at the Topper site. (SEPAS photo by Jessica Beltman)



Fig. 6: The 4 X 4-meter excavation unit on the terrace area at Topper being excavated in May of 2010. (SEPAS photo by Jessica Beltman)

and Saluda Counties all failed to respond to the magnet. However, metavolcanic lithics from the Pee Dee River in both S.C. and N.C. and the Uwharrie Mountains frequently do react suggesting this region may be the source of magnetic artifacts. Magnetic flakes adjacent to the Pee Dee River in both S.C. and N.C. are rather common (Goodyear 2010).

Activity at the Topper site began early in 2010 with a February 21st tour for the Advisory Board of the Center for the Study of First Americans (CFSFA) at Texas A&M University (Fig. 4). As part of their Advisory Board's winter meeting in Charleston, a tour was requested by Dr. Mike Waters, CFSFA Director and Dr. Ted Goebel, Associate Director, to see the site and the facilities available to us at Clariant. The deep Pleistocene stratigraphy is well exposed under the pavilion and open units on the adjacent Hillside allowed inspection of Clovis stratigraphy there. Graduate students Doug Sain and Ashley Smallwood were present to help explain

the archaeology and stratigraphy related to their thesis and dissertation research.

In 2010, fieldwork began in early March 2010 with a two-week excavation of the terrace area. For the second year now, a short field school was conducted for



Fig. 7: Chert core in-situ in the Pleistocene terrace excavation at the Topper site, May of 2010. (SEPAS photo by Doug Sain)

University of Tennessee undergraduates on their spring break. These students of Professor David G. Anderson and members of the Anthropology Club spent a week learning excavation techniques and helping us dig a 4 X 4-meter block a few meters north of the pavilion (Fig. 5). This excavation was conducted in order to determine if the preClovis manifestations

so prominent under the pavilion exist to the north. A 4 X 4-meter unit needed to be opened in order to safely go down two plus meters to reach the top of the Pleistocene terrace. A rather extensive and dense lithic floor was encountered about a meter below surface in the stratigraphic position of Clovis on the terrace (Fig. 6). This floor was so dense that it wasn't finished being excavated until early June. Hundreds of lithic artifacts ended up being three dimensionally plotted with the total station. This lithic floor has been the subject of meticulous analysis by Derek Anderson reconstructing micro stratigraphy and refit analysis. His results are presented in this issue of *Legacy*, pages 16-19.

Starting May 2, 2010 as part of the Allendale Paleoamerican Expedition, six weeks of excavation were conducted variously at four locations at the Clariant Corporation chert quarries. As has been customary, the first two weeks were involved in underwater data recovery at the Big Pine Tree site. This year an airlift

was employed to examine the area further out in the creek. Like the results near the collapsed bank, the usual prehistoric artifacts were recovered in profusion representing all time periods. Sediments near the center of the stream channel are removed by the current, leaving artifacts on the hard bottom. The underwater operations were conducted under the supervision of Ashley Deming, Manager of SCIAA's Sport Diver Program in the SCIAA Charleston office with her capable staff of Carl Naylor and Joe Beatty.

Several sport divers participated in 2010 who were needed to ferry the screens back from the center of Smiths Lake Creek. Underwater archaeologists Jessi Halligan from Texas A&M University and Andrew Roberts of SWCA Environmental Consultants of Houston, Texas conducted underwater surveys of Smiths Lake Creek

and the chute channel of the Savannah River adjacent to Topper mapping and collecting chert cobbles.

Starting Week III, a single two-meter unit was excavated on the land portion of Big Pine Tree site. Shane Miller and Adam Russell directed that work to gather additional geological and paleobotanical from this multicomponent site. Adam Russell is doing his masters thesis from the University of Tennessee on the Allendale (aka "MALA") occupation. Stephen Carmody of the University of Tennessee was also present to gather flotation samples of charred plant remains. A classic Clovis preform was found at the bottom of the unit, as was expected. Shane Miller is intending to pull together this season's work plus the previous excavations in the form of a monograph synthesizing this important site.

Starting Week I, excavations continued in the lithic floor in the 4 X 4-meter unit at Topper (Fig. 6) and were completed by Week V. A Taylor point and small endscraper were found indicating an Early Archaic component and a few weathered blades and unifaces were also found that are probably Clovis. Over 1,300 artifacts were mapped using the total-station, which were nearly all lithic

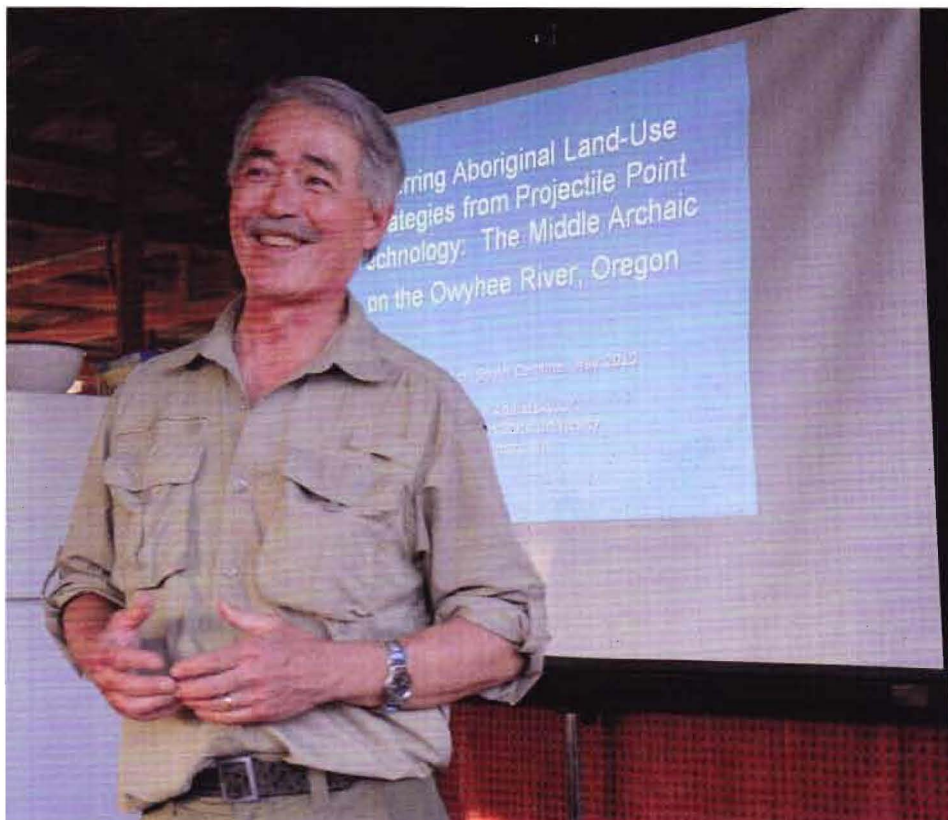


Fig. 9: Dr. William Andrefsky lecturing in the picnic shelter during the 2010 Allendale Paleo-american Expedition. (SEPAS photo by Jessica Beltman)

reduction debris. The deposit ended fairly abruptly at which point a two-meter unit was set up in the center and excavated in 10 centimeter levels down through the Pleistocene alluvial sands to the top of the Pleistocene terrace. Only one cortical

cobble was found in the unit indicating the absence of the normal preClovis industrial chert processing debris as is typical in the area under the pavilion. Later on in June 2010, Dr. Christopher Moore of the Savannah River Archaeology Research Program, helped take OSL samples for the anticipated dating of the lithic floor and redating the Pleistocene sands below.

Excavations supervised by Doug Sain continued for all five weeks in the Pleistocene terrace under the pavilion. This is an effort to increase the artifact recovery of this minimally pre-20,000 year old unit, which may be 50,000 years or older. Another well-preserved chert core was found this year in the top of the Pleistocene terrace (Fig. 7). Because of the high moisture content in the terrace, the chert doesn't tend to weather like it normally does in the upper preClovis and Clovis levels. The work is hard and slow due to the high clay content of the sediments, which need to be wetted before digging then water screened. The geological work of Professor Scott Harris of the College of Charleston and his students, Tina Poston and Katie Luciano,



Fig. 8: Sediment grain size distribution from ground surface down into the Pleistocene terrace showing texture changes by stratigraphic unit. (Fig. 7 of Harris, Poston, and Luciano poster, 2010)

who analyzed the sediment sizes of the entire four-meter stratigraphic column under the pavilion, was completed in 2010 and was presented as a poster program in the S.C. Academy of Sciences meeting (Harris et al. 2010). The stratigraphic break between Holocene colluvial sands eroding off the hillside with Clovis at the bottom of that unit and the coarser sands of the Pleistocene alluvium below is rather dramatic (Fig. 8). Likewise, the fining up sequence in the Pleistocene terrace with increasing clay and silt at the top is also apparent. A Bt paleosol has also formed in the top of the terrace adding some time for its development. Megan Hoak of the University of Tennessee is doing her masters thesis on debitage distribution from the surface down through the Pleistocene terrace searching for stratigraphic trends and information about site taphonomy (Hoak 2010).

Excavations in the area known as the Hillside continued in 2010. Ashley Smallwood was the overall supervisor this year assisted by supervisors Erik Johanson, Sarah Walters, and Derek Anderson. Three new two-meter units were opened searching for the ubiquitous Clovis occupation. Unit N180/E22 was completed by Ernie Plummer and his team. An interesting abrader was found down at what is thought to be the Clovis zone. One unit was placed much further north than we have gone before to help define the northern extent of the site. N205/E37 was begun by Bill Covington and continued with the help of Derek Anderson in what proved to be an exceptionally deep deposit. A Taylor point and two small end scrapers were found around 110 centimeters below surface associated with what appears to be culturally related charred nutshell fragments. Charred hickory shells are being AMS radiocarbon dated in an effort to determine if they are Early Archaic in age (> 9,000 RCYR). Because of the artifact density of the Early Archaic deposit, it was not possible to determine if Clovis was below. This will be determined in 2011. If Clovis is found below 110 centimeters below surface, it will be the

deepest level yet for the Hillside. The third unit, N207/E64, was supervised by Sarah Walters and Ashley Smallwood, and they encountered Clovis preforms and an exceptionally large number of flake tools. This floor was so dense it was not finished and should be completed in the 2011 season.

Once again the field lab was operated during the dig accommodating the numerous dredge artifacts from Big Pine Tree

site and conducting analysis for the terrace 4 X 4-meter unit. Erika Shofner helped start the lab in early May 2010 and Jesse Tune, now a doctoral student at Texas A&M University, spent the remaining five weeks supervising analysis. Plans are being made to increase the amount of lab work for the 2011 season.

Several speakers gave excellent programs in the evening during the 2010 Field Season. These include Dr. Andy Hemmings on organic artifacts from North American Clovis sites, Dr. Randy Daniel on the Uwharrie Mountain N.C. and Allendale S.C. Early Archaic Macroband model, Dr. Barbara Purdy on the incised image of a mammoth on a mineralized bone from the Old Vero site in Florida, Dr. Christopher Moore on excavation results of Carolina Bays in S.C., and Dr. William Andrefsky of Washington State University on methodological approaches to lithic analysis. Dr. Andrefsky (Fig. 9), author of several books on lithic analysis, delivered a fascinating lecture on insights into western



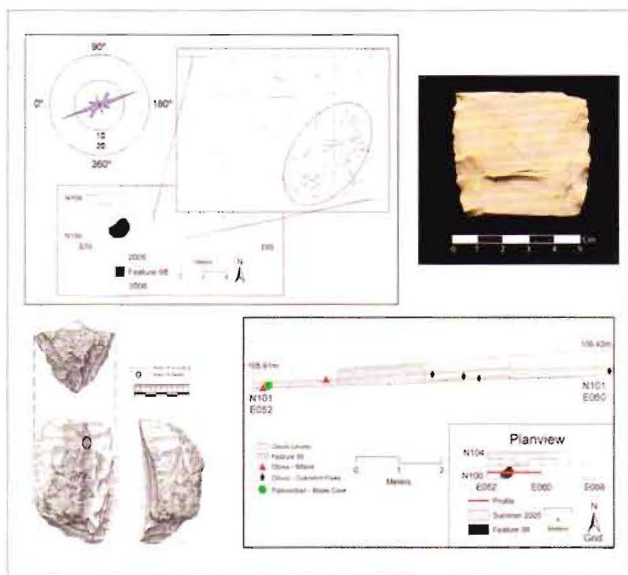
Fig. 10: John White, Interpreter Ranger, at Rivers Bridge State Historic Site. (Photo by Douglas A. Sain)

U.S. Archaic settlement systems through stone tool studies. We are pleased to have such fine scholars visit our field camp each year providing wider contexts for our Paleoamerican research.

A number of publications on Topper and SEPAS-related research appeared in 2010 and more will appear in 2011. A major synthesis of the Paleoindian Data Base of the Americas (PIDBA) was published by David G. Anderson (2010) and his graduate students, several of whom are Topper site researchers. The S.C. Paleo Point Data Base forms a part of the national database compiled by PIDBA. The graduate student researchers have been especially productive. Shane Miller's revised masters thesis on his Clovis excavations on the Hillside lower firebreak became the first Occasional Paper of SEPAS (Miller 2010), as produced by our series editor Dr. David G. Anderson (Fig. 11). Shane and Ashley Smallwood also published a book chapter on their Topper Clovis excavations in a book

Clovis Excavations at Topper 2005-2007: Examining Site Formation Processes at an Upland Paleoindian Site along the Middle Savannah River

D. Shane Miller



Occasional Papers 1
Southeastern Paleoamerican Survey
South Carolina Institute of
Archaeology and Anthropology
University of South Carolina



Fig. 11: Cover of first monograph published in Southeastern Paleoamerican Survey Occasional Paper Series #1. (SEPAS photo)

forthcoming in 2011 by the University of Alabama Press. Ashley also published an article on the Topper Clovis bifaces in the *Journal of Archaeological Science* (2010) as part of her dissertation research. Doug Sain finished his Masters Thesis on Clovis blade technology at Topper at Eastern New Mexico University (2010a). Doug also published two journal articles on the blades, one in *Current Research in the Pleistocene* (2010b) and the other in *South Carolina Antiquities* (2010c). Sain and Goodyear (2011) also published a comparison of blades from Topper and the Big Pine Tree site in the forthcoming University of Alabama book. Goodyear published an article on a post-Clovis North American fluting horizon in *Current Research in the Pleistocene* (2010), and an article in *South Carolina Antiquities* (2010) on possible exotic lithic raw materials among South Carolina fluted points.

John W. White, a long-time Topper supporter and archaeological colleague, recently moved into the Allendale vicinity, where he was appointed Ranger

permanent exhibit on Topper at the nearby University of South Carolina Salkehatchie campus in the town of Allendale. This is the first permanent exhibit of the site and its artifacts, which will be housed in the Library Building at USC Salk. Dean Ann Carmichael (Fig. 14) of that campus and myself obtained grants for the exhibit from John Winthrop of Charleston, Clariant Corporation, and the Coastal Community Foundation, Winthrop Family Allendale/Hampton Fund.

The South Carolina Archaeology Public Outreach Division (SCAPOD) headed by Erika Shofner, Helena Ferguson, and Meg Gaillard, will produce the exhibit, which is expected to open sometime in the Fall of 2011. USC Salkehatchie is also helping us out with

Interpreter of Rivers Bridge State Historic Site (Fig. 10). John helped excavate at Topper in the early days of the preClovis discovery and worked in the SCIAA lab. He has a Masters Degree in anthropology with a specialty in archaeology from the University of Arkansas, and has considerable skills in lithic analysis. We look forward to John being present in this part of South Carolina and aiding us in site and artifact identification.

An exciting new SEPAS development is the establishment of a

storage space for artifacts, a great help to our yearly excavations because of the close proximity of the campus to Topper.

As always, many individuals and organizations provided assistance to our program to help us to continue this research on the earliest South Carolinians I'd like to thank the numerous volunteers who signed up for the Expedition in 2010 as well several donors who have contributed funds to help out in so many needed areas. The volunteer staff have made themselves invaluable to our annual excavations donating their time and talents. These include Ann and Bill Covington, Joan and Ernie Plummer, Carol Reed, Jean Guilleux, Judith Scruggs, Bill Lyles, Alison and John Simpson, and Steve Williams. Jean Guilleux also purchased a storage tent for our equipment, and Leon Perry donated a large canopy to cover the 4 X 4-meter excavation unit. Leon also purchased a water pump and a rotating laser level for our excavations. And of course SEPAS, Inc. directed by Tom Pertierra, makes our excavations possible each year through logistical support, equipment, personnel, web site (www.allendale-expedition.net) list serve, student support, and many other resources. Our host each year and owners of our excavation sites is Clariant Corporation who always makes us feel welcome and accommodates many of our needs in the field. Thanks especially to Daniel Bessinger, Human Resources Manager at the Martin Plant for his attentiveness. Connie Knight, Director of



Fig. 12: A basalt Dalton point from the Kolb site (38DA75), attached to a magnet. (SCIAA photo by Jessica Beltman)

TOPPER CLOVIS

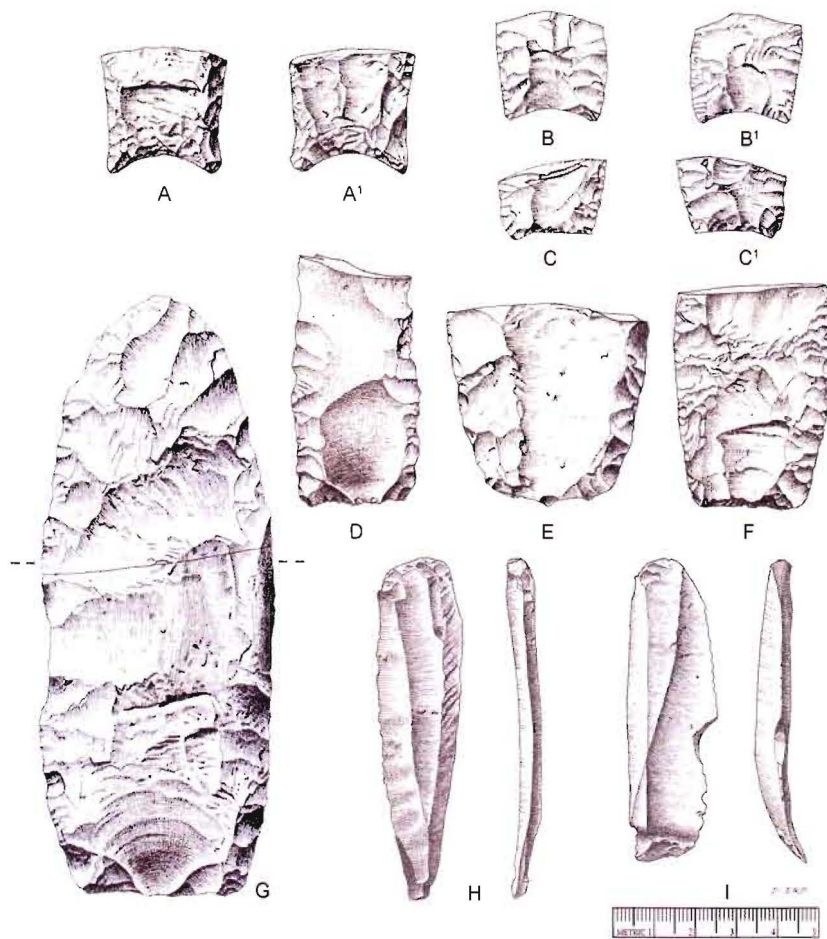


Fig. 13: New t-shirt design featuring Clovis artifacts drawn by Darby Erd from the Topper site. (SEPAS image by Anna E. Smith)

Communications and Corporate Affairs at Clariant national headquarters, was helpful with media coverage and facilitating a grant from Clariant Corporation for the Topper site exhibit. Other businesses that have contributed include Bruker Analytical, Bill and Jack Kneft of Colonial Packaging, Darrell Barnes of Yesterday's Restaurant, and Reid Boylston of Reid's Food Lion in Barnwell, S.C. Plans are being made to return to Topper and Big Pine Tree starting May 2nd through June 4th, 2011. As always, free tours for the public are conducted each Saturday morning from 10:00 AM til noon.

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Fig. 14: Dr. Ann Carmichael, Dean of USC Salkehatchie and Al Goodyear making plans for the Topper site exhibit to be installed at the Allendale campus (SEPAS photo by Derek T. Anderson)

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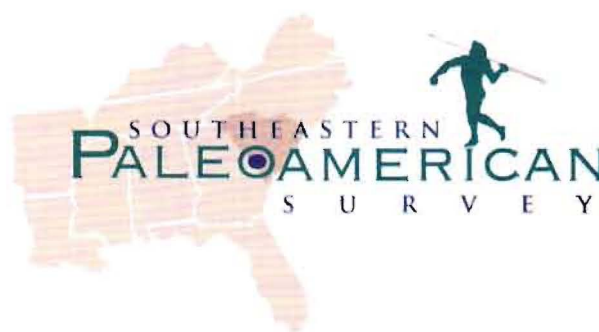
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Southeastern Paleoamerican Survey logo. (SEPAS photo)

The 2010 4 X 4-Meter Unit at Topper: Preliminary Lithic and Spatial Analyses

By Derek T. Anderson

During the 2010 field season, a 4 X 4-meter unit was excavated on the lower terrace at the Topper site (38AL23). The unit is located approximately 15 meters north of the large, ongoing Pre-Clovis excavation area (N262-266) (Fig. 1) where substantial amounts of lithic material have been recovered well below the Clovis component. Situated in the Pleistocene riverbed, it was hoped that the 4 X 4 unit would provide more information about the extent and possible origin of the deeply stratified material. However, excavations down through the Pleistocene sands to the top of the terrace showed very little evidence of the Pre-Clovis material.

In sharp contrast, however, the upper deposits in the 4 X 4 were extremely productive. Initial excavations during the spring dig in March exposed a lithic “floor” below the Middle Archaic component, and continued excavations in May and June 2010 resulted in the mapping of 1,179 pieces of chipped stone in situ. Although no diagnostic Clovis

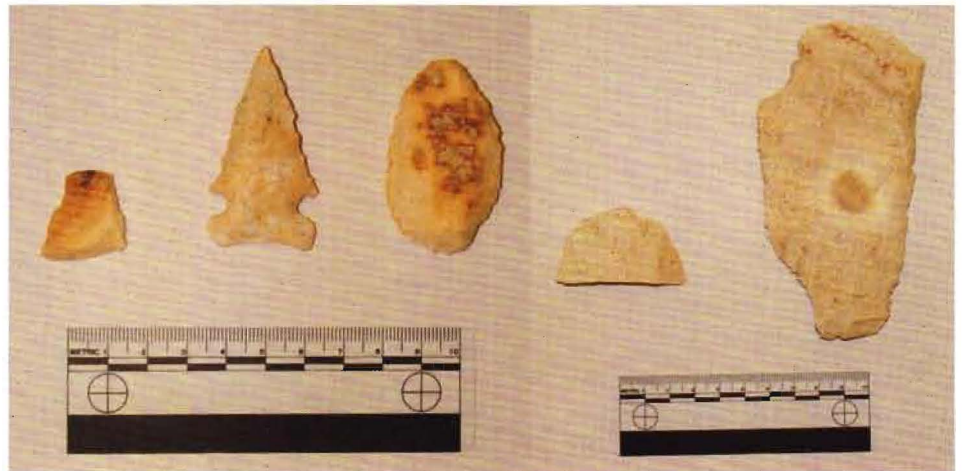


Fig. 2: Early Archaic tools (L) and probable Clovis tools (R) from the 4 X 4-meter unit. (SCIAA photos)

material was recovered, based on the stratigraphy of other excavation units on the lower terrace, it was initially assumed that most or all of the material from the floor was Clovis-aged, and a large proximal portion of a prismatic blade, as well as a handful of large utilized flakes, seemed to confirm this. But the discovery of an Early Archaic Taylor projectile point, a probable Taylor perform, and a hafted

end scraper (Fig. 2) all also relatively low in the stratigraphic profile, complicated the issue and raised the question of whether we were excavating a mixed assemblage (Taylor and Clovis) or whether there was any Clovis material present at all.

Assessing the integrity of deposits within the unit then became a priority. If the deposits were mixed, then the presence of diagnostic Early Archaic tools at an

unexpected depth could be explained as a result of vertical movement of material. However, there was no obvious indication during excavation of any type of disturbance—cultural or biological—near any of the diagnostic tools. In addition, because the 4 X 4 unit was located at the base of a steep hill, the deposits themselves sloped substantially downhill from east to west, making the identification of discrete levels or occupations within the 30 centimeter-thick “floor” (or disturbed areas between them) nearly impossible while we were digging.

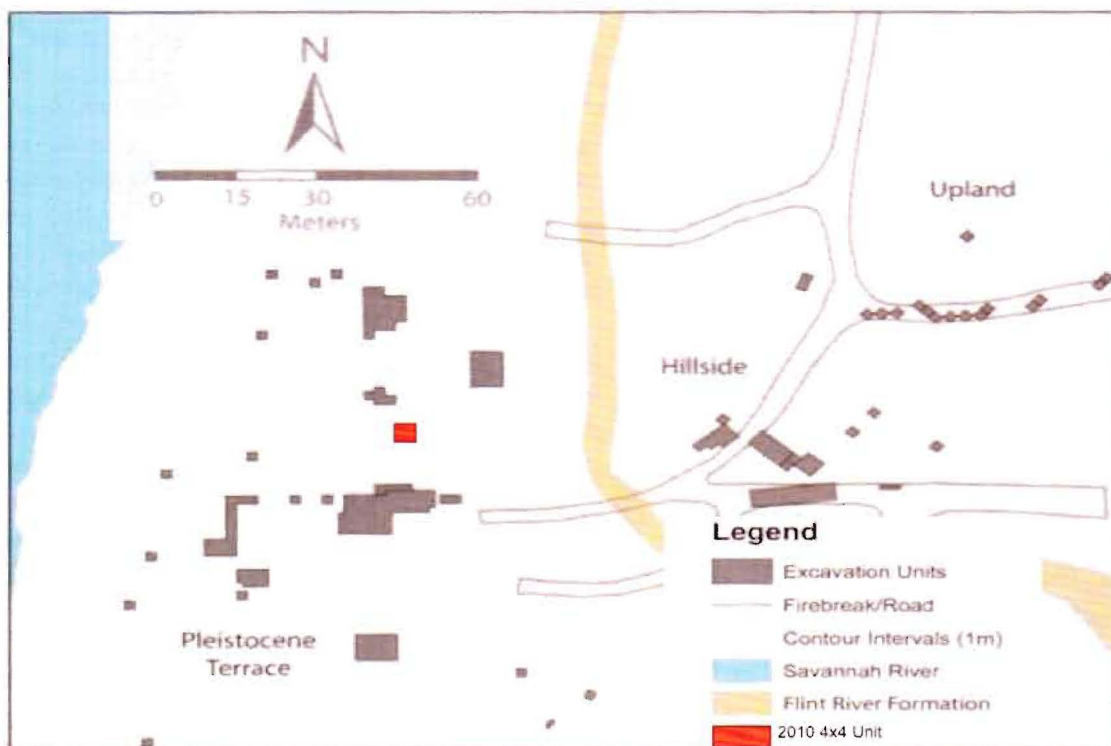


Fig. 1: Map of excavations at Topper (modified from Miller 2010). (SCIAA photo)

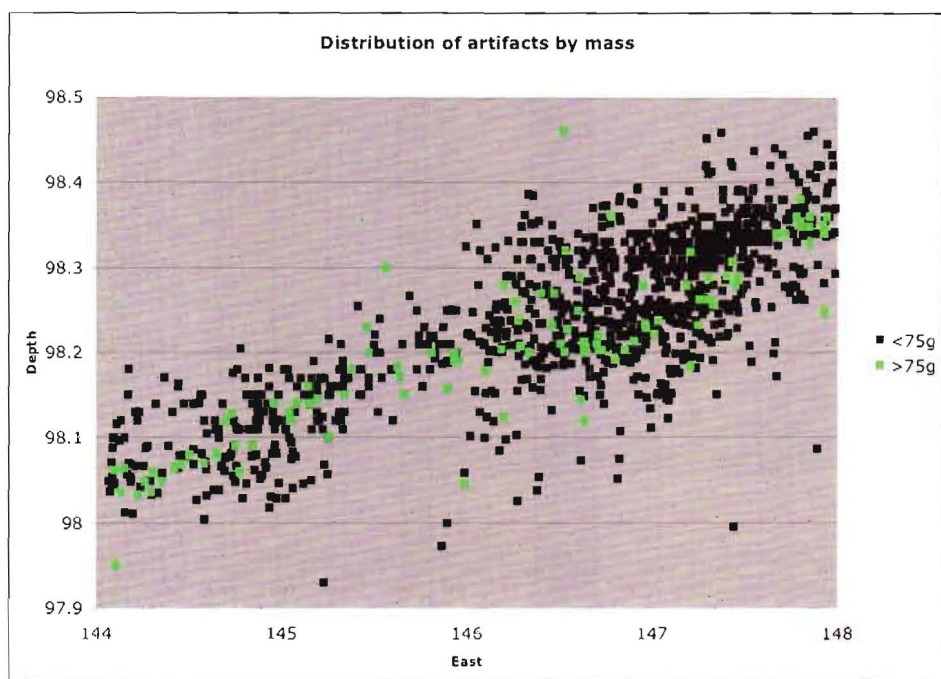


Fig. 3: Vertical backplot of artifacts separated by mass. (SCIAA drawing)

The fortuitous discovery while we were excavating of two pairs of chipped stone flakes that refitted to each other hinted at some integrity of deposits horizontally, so in September 2010, a lithic analysis was undertaken that included refitting and a spatial examination of the material from the 4 X 4.

Sorting It All Out: Preliminary Analysis of the 4 X 4

Differentiating between two (or multiple) lithic assemblages is often aided by looking at variables like variations in size of debitage or type and treatment of raw material. The 4 X 4 assemblage is problematic because we only have diagnostic tools from one time period (Early Archaic—Taylor) and there is no definite evidence of a Clovis presence in the unit. This being the case, differences in, or clusters of artifacts of a certain type from the lithic floor could potentially reflect intra- or inter- assemblage variations. Without the presence of diagnostic material or absolute dates, we must rely on as many other lines of evidence as possible.

A variety of categorical variables were recorded for every piece-plotted item recovered from the lithic floor, the most objective of these being artifact mass. Fig. 3 shows a vertical backplot of all piece-plotted chipped stone from

the 4 X 4, with all items greater than 75 grams in green and all less than 75 grams in black (although it is arbitrary, 75 grams was chosen to illustrate this example because items of this size are generally too heavy to move much in post-depositional contexts). Although the artifacts in the floor are fairly spread out in vertical space, the heavier pieces in the assemblage tend to cluster tightly around a line that is interpreted as representing the original depositional surface. Whether they are Clovis or Archaic—or a deflated surface representing both occupations—is unclear from this graphic. Clovis-aged debitage at Topper is generally larger than debitage from Archaic contexts, but we cannot call this a Clovis floor based on artifact size alone.

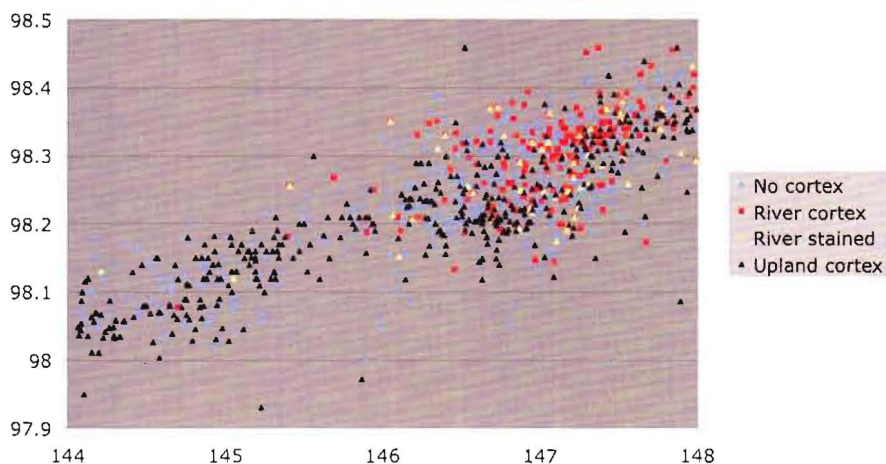


Fig. 4: Vertical backplot of artifacts separated by cortex type. (SCIAA drawing)

Another characteristic recorded for each artifact is the type of cortex present. Cortex is the weathered outer surface of the rock, and it takes different forms under different conditions. The lithic material at Topper can be classified into three categories: upland cortex, which is usually chalky colored and rough; river cortex, which ranges from tan to dark brown and is typically not as rough as the upland material; and river stained material, which appears to be relatively recently flaked material that has been re-exposed to the tannins in the river, which form a thin 'skin' or stain over the surface of the rock. Naturally, a portion of the assemblage is made up of flakes that do not have any cortical material on them; these are simply classified as tertiary or "no cortex" specimens.

Fig. 4 is the same vertical backplot of artifacts from the 4 X 4, separated into categories based on type of cortex. The pieces without any cortex—shown in blue—are scattered evenly throughout the profile, but the other three categories appear to cluster. The material with river cortex and river staining—shown in red and yellow—is almost all in the eastern half of the unit, and most is concentrated in the upper half of the "floor." In contrast, the material with upland cortex—shown in black—tends to appear in the lower half of the assemblage and mimics the distribution of heavy artifacts in Fig. 3.

The correlation of the larger pieces in Fig. 3 with the pieces of upland cortex in Fig. 4 makes a stronger case for two separate accumulations of material and a



Fig. 5: Examples of two different nodules from the 4 X 4-meter unit. (SCIAA photos)

potential Clovis occupation in the lower half of the deposit. In addition, the fact that the hafted endscraper and the Taylor perform both exhibit river cortex hints that the Taylor people may have preferentially been selecting and utilizing rock with river cortex, while the Clovis people—if they were indeed there—seem to have utilized pieces with upland cortex. This is not a pattern that holds true for the rest of the site, however, as Clovis artifacts have been recovered in other excavation areas that contain river cortex. Continued analysis of additional debitage attributes may help

of the site. Refitting is a fairly common component of lithic and spatial analyses in the Old World, but is not often used by American archaeologists due to the time and costs involved (e.g., Schurmans and De Bie 2007). However, we decided to proceed for three reasons. First and foremost, it was hoped that a thorough refitting study would help to identify multiple components in the block—Clovis and Taylor—if they indeed existed. Second, the horizontal integrity of deposits had already been hinted at by the in-field identification of pieces of debitage that

stone from the lithic floor that was mapped in place was individually labeled with a unique identifying number. This allowed for the removal of artifacts from individual bags and the combination and sorting of pieces on larger trays. Analysis began by searching for refits within each quad / level bag—1 X 1-meter by 5 centimeters of vertical depth, then from all levels within an individual unit—2 X 2-meter by ~30 centimeters depth—and finally from the entire excavation unit—4 X 4-meter by ~30 centimeters depth. Although the entire assemblage consists of locally procured



Fig. 6: Examples of refit sequences: six-piece stacked sequence (L); six-piece reconstructed core (C, R). (SCIAA photos)

to clarify the situation further, and it is hoped that a series of OSL samples placed at five-centimeter intervals throughout the vertical profile will return both Clovis and Taylor-aged dates as well.

As previously mentioned, a refitting study of the chipped stone material from the 4 X 4 was also undertaken, in order to assess the integrity—both horizontal and vertical—of deposits in the unit, and also to examine lithic reduction strategies employed by the knappers in this area

refit, suggesting a broader pattern of intact deposits throughout the block. And third, attempts at refitting assemblages that are associated with quarrying and core reduction typically results in a higher success rate than attempts at refitting biface-reduction assemblages, both due to size of material as well as reduction strategy used by prehistoric knappers (e.g., Laughlin and Kelly 2010). Although bifacial reduction does occur at Topper, at first approximation the material from the

Coastal Plain chert, enough variation exists within the geological source in terms of coloration, inclusions, and cortex type to separate pieces into minimum analytical nodules (Fig. 5) (Larson and Kornfeld 1997). Pieces were then sorted based on portion (proximal / medial / distal) and refits were recorded.

Examples of the refitting study in Fig. 6 is ongoing, but at this point, 256 of the mapped pieces have been found to refit—approximately 21.7% of

4 X 4 appeared to be related largely to core reduction and early-stage biface production. Because refitting as a methodology that requires unrestricted physical manipulation and maneuvering of artifacts, each piece of chipped

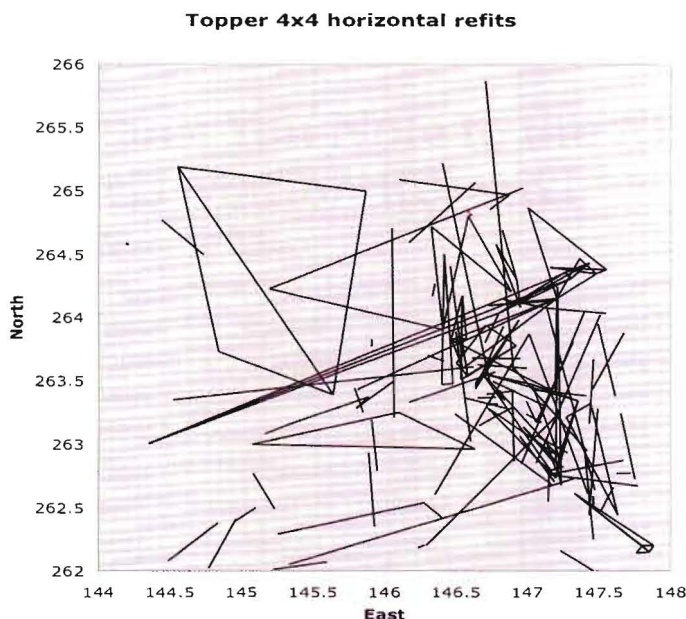


Fig. 7: Plan view of refitted artifacts. (SCIAA photo)

the assemblage, making the Topper 4 X 4 success rate one of the highest ever recorded for a New World assemblage of any type (Laughlin and Kelly 2010). Fig. 7 is a plan view or bird's eye view of all currently known refit sequences between mapped pieces, with lines connecting individual pieces that refit to one another. Although this horizontal view does not help to clear up the question of multiple occupations, it does provide a third and unexpected category of data—that of spatial organization of the prehistoric occupants of the site. Horizontal integrity of the deposits is suggested based on the clusters of refits originating and/or terminating from specific areas—potentially representing individual knappers—and a lack of refits oriented in one direction, which would suggest displacement by slope wash, flooding, or a clean-up event. Interpretation of these spatial results will continue as more refit sequences are discovered, but the preliminary indication is that the deposits in the 4 X 4 are relatively intact and undisturbed.

Vertical distributions of refit sequences, however, indicate that some post-depositional mixing has occurred. Fig. 8 is a vertical backplot of refitted items from the 4 X 4. The green line at the top represents the current ground surface;

all other lines link individual pieces of chipped stone that refit. Most refitted items seem to follow a slope that mirrors both the current surface and the proposed prehistoric surface indicated by heavy artifacts discussed previously and shown in Fig. 3. However, there are some artifacts that do not follow this trend, and indicate significant vertical movement—these are shown as

red lines and represent refit sequences with vertical distances of more than 5 centimeters.

While some vertical displacement has occurred, in most cases movement of artifacts seems to be limited to less than 5cm up or down in the profile, which is unexpected considering the cumulative effects of 10,000 years of bioturbation. The lack of obviously disturbed areas of the profile suggests that the patterns observed in Figs. 3 and 4 may reflect two separate components—an initial and relatively quick Clovis occupation followed by a more intense Taylor occupation.

Analysis of the 4 X 4 is ongoing and will continue throughout the spring. Identification of additional nodules and refit sequences, along with the mapping of thermally altered material, should help to highlight individual activity areas within the block. Likewise, the examination of refit sequences will provide insight into the technological aspects of stone tool manufacture at Topper. Although refitting can be time consuming,

the success of this study hints at the vast potential for similar work in other excavation blocks throughout the site.

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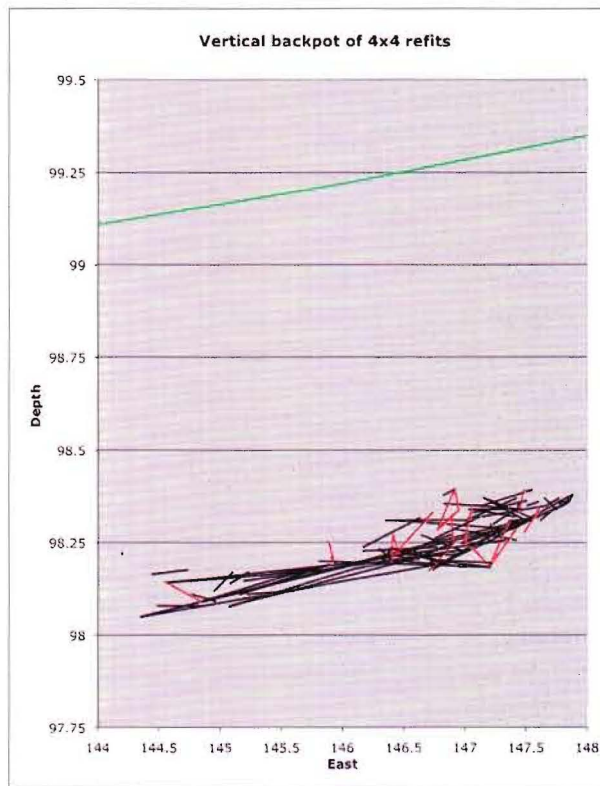


Fig. 8: Vertical backplot of refitted artifacts. (SCIAA drawing)

Columbia's Two Civil War Prison Camps—Camp Asylum and Camp Sorghum

By Chester B. DePratter, James B. Legg, and Kalla E. DePratter

During the early years of the Civil War, Columbia was far removed from the fighting in the Virginia area and that taking place in Tennessee and surrounding states. Union forces captured Port Royal Sound on the lower coast and laid siege to Charleston by June 1863, but that fighting had little direct impact on Columbia and its residents.

In the spring of 1864, Union forces commanded by General Ulysses S. Grant were fighting their way south through Virginia toward Richmond, the Confederate capital. Fearful that the large number of Union prisoners housed in Danville and Libby Prisons would be freed in the event of Richmond's fall, enlisted prisoners were transported to Andersonville prison in southwestern Georgia, and officers were taken to a prison in Macon, Georgia,

As Union forces under General W.T. Sherman made their way south from Chattanooga and then through Atlanta, which surrendered in September 1864, Confederate officials became concerned about what to do with the large number of Union prisoners being held at Andersonville, Macon, and elsewhere. Rather than leaving them in Sherman's path, an effort was made to shuttle the POWs ahead of the Union army's advance.

Beginning in July 1864, contingents of troops were moved from the central Georgia prisons. Some were shipped to Camp Lawton, near present-day Millen, Georgia, while others were sent to camps in Savannah and Charleston. As Sherman's army continued its advance to the south from Atlanta in November and December 1864, the prisoners were transported once again. Enlisted men were shipped to the newly erected Florence stockade, and some of the officers were sent to Columbia.

Camp Sorghum, the officers' camp, was a hastily built facility in what is now West Columbia. When the first prisoners

arrived there in early October 1864, the prison contained no buildings and it had no surrounding wall. It was little more than a five acre clearing with a line of guards posted around its perimeter. Soon after this "prison" opened, it contained more than 1,500 Union officers. The prisoners were forced to dig holes to live in, and food was in short supply. Winter conditions were harsh, but surprisingly

build additional barracks, and still others resided in holes in the ground.

Camp Asylum operated from December 12, 1864 to February 14, 1865, when the rapid approach of Sherman's army toward Columbia caused the prisoners to be moved once again. This time they were transported to Charlotte, and then to Union-held Wilmington, North Carolina. Shortly thereafter the war ended



Drawing made of Camp Asylum soon after it was abandoned in February 1865. (Photo in Frank Leslie, 1896)

few men died. Escapes were frequent, and in the two months the prison was in operation, hundreds of men escaped. Most of these escapees were recaptured before they were able to reach Union-controlled territory.

By early December 1864, prison officials had found a place to move their charges. A walled enclosure on the grounds of the State Lunatic Asylum on the northwestern edge of Columbia was seen as the perfect alternative to the open setting of Camp Sorghum. Surrounded by a 12-foot high brick wall and with several barracks already completed, the new camp, Camp Asylum, was made home to around 1,200 officers. Some were housed in the new barracks, some worked to

and the prisoners on both sides were freed.

The Archaeological Research Trust Board funded our research on the two Columbia prison camps, and that process has now begun. On-line and archival searches have led to the discovery of an almost overwhelming mass of relevant documentary records including an abundance of primary accounts written by the inmates themselves. This material will allow for an unmatched accounting of the prisons' history and the sufferings of their occupants. At present, fieldwork has not begun, but the process of obtaining access to the two prison sites is underway. We anticipate being in the field soon, and we will present a full description of that work in the next issue of *Legacy*.

Applied Research

A Thank You Note to the Archaeological Research Trust on Francis Marion Research

By Steven D. Smith

My first “book” on Francis Marion was written in either 4th or 5th grade, and I was clear (as only a 10-year old can be), concise (two pages), and well-researched (from a newspaper article I now hold). Since then, time, age, beer, and the educational system have ingrained in me the habits of obfuscation and verbosity, yet I think I still do pretty good research. My latest “book” on Francis Marion, a 425-page dissertation completed this fall, certainly illustrates the former two, and hopefully the latter.

Archaeological Perspectives on Partisan Communities: Francis Marion at Snow’s Island in History, Landscape, and Memory, looks at a colonial community situated along the Pee Dee River and its transformation into a highly successful, even legendary, partisan force led by Francis Marion through the thick and thin of the last four years of the American Revolution. At the geographical center of this community was Snow’s Island. From August 1780 until March 1781, this swamp highland, surrounded by Lynches River, Clark’s Creek, and the Pee Dee, was Marion’s supply depot, campground, rendezvous, and military rear base. From Snow’s Island, Marion and his partisan force, consisting of the Williamsburg Militia, the Britton’s Neck Militia, and a host of random volunteers, harassed the British as opportunities presented. Through skill and luck (lots of luck), Marion alluded the British, cajoled his partisans to remain steadfast, and protected the residents surrounding Snow’s Island through the fall and winter of 1780-1781. The British captured and destroyed the base in the spring of 1781, but by that time its strategic usefulness was near an end. General Nathaniel Greene, commander of the American Continental Forces, entered South Carolina shortly afterward and America turned to



Sean Taylor, Steve Smith, and Audrey Dawson at Francis Marion’s redoubt across from Snow’s Island. (SCIAA photo)

the offensive. Marion’s role grew into the district commander of all of northeastern South Carolina, and the community surrounding Snow’s Island continued its support, not only providing Marion manpower, but also large numbers of cattle, hogs, and forage.

This story is told in my dissertation, but with a unique perspective, viewing the Snow’s Island community through the eyes of not only a historian, but also through those of an archaeologist and anthropologist. The study focuses on *community* and its operation as a social unit within the context of war—partisan war especially. It is doubtful anyone else has used this kind of multi-disciplinary approach to the study of partisan war before me. Readers will have to judge for themselves if “anyone” had better sense to attempt it.

From age ten to, well, much later, I have written 12 reports, book chapters,

encyclopedia entries related to Francis Marion, and now a dissertation. Much of the research for these works, and especially the writing of the dissertation, was funded by the SCIAA’s Archaeological Research Trust Fund, both collectively through grants and through individual member contributions. I write this *Legacy* article to sincerely and humbly thank all of you for your funding, interest, and support, throughout the last five years as I completed the requirements for the Ph.D. I especially want to thank Ed and Dorothy Kendall, George Bell, Chip Helms, Russell Burns, and John Frierson for their many contributions. I can only ask that you continue to support others at SCIAA in the completion of their education also. Meanwhile, I’m planning my next book on Francis Marion—the one I had in mind in the 5th grade—clear, concise, and well researched.

Savannah River Archaeology Research

Preserving Cultural Landscapes and NEOMAP Project Update for 2011

By J. Christopher Gillam, Savannah River Archaeological Research Program (SRARP)

The Neolithization and Modernization of East Asian Inland Seas (NEOMAP) project has provided me with some unique research and educational experiences in recent years. NEOMAPs' host institution, the Research Institute for Humanity and Nature (RIHN) in Kyoto, is an incredible think-tank of international scholars working on an array of topics concerning humanity's relationship with the environment, ranging from

prehistoric archaeology to the genetic changes of plant and animal species. NEOMAPs' goals are specifically to gain a better understanding of the cultural landscapes and landscape changes that occurred as cultures developed agriculture and became more socially complex (Neolithization) and further changed through industrialization, economic trade, organized religion, and the political development and turmoil of nations (Modernization).

In addition to traditional research products, such as individual and group reports, academic presentations, and publications, another key role is to advance theoretical, factual, and practical issues concerning our relationship with

nature through intellectual discourse, public outreach, and the encouragement of innovative thinking. In that role, annual meetings and special public symposia have been particularly fruitful. My part in the public symposia has ranged from talks alongside contemporary science fiction writers on the parallels of science-fact and science-fiction (Gillam 2009a),—the most fun I've had in a scientific symposium—to becoming better advocates for humanity and nature (Gillam 2010) with examples of pollution and waste in beautiful Kyoto, as well as the U.S., probably the most contentious talk of my career. For the latter topic, the use of the local setting of Kyoto as a negative example, was a pre-approved and strategic choice to

foster debate that successfully ruffled a few feathers in the audience, leading to a fantastic discussion about projected, public, and marketed perception versus environmental reality! Kyoto is the historic jewel of Japan, but is also a large modern city. There too, nature bears the toll of humanity...however, I still love Kyoto!

In March 2011, the annual meeting will focus on cultural landscape preservation, a topic that has international significance given the globalization of modern culture (consumption monoculture) and increasing impacts of population on present and past cultural landscapes worldwide (overpopulation, pollution, waste, mining, built



Fig. 1: Scholars from Japan and the southeastern U.S. visiting the Fig Island site, South Carolina, in 2007. (SCIAA photo)

environments, and consumption infrastructure). This topic will give me another opportunity to talk about the archaeology of South Carolina. As you may recall from prior issues of *Legacy*, a large part of my mission in participating in international studies is to promote interest in the archaeology here at home. As part of that goal, I have not only given many presentations on the archaeology of South Carolina at international meetings, but have also led three archaeology tours here that have fostered a growing research interest in South Carolina by my international colleagues (Figs. 1 and 2; Gillam 2007, 2009b).

My presentation in March will highlight many well-known archaeological and historical landmarks in South Carolina within the context of preserving cultural landscapes, including historic Charleston and plantations, the archaeology of the Savannah River Site facility, and notable prehistoric sites such as Sewee Shell Ring, Fig Island, and the Allendale chert quarries. Here in South Carolina, coastal sites are perhaps facing the greatest jeopardy. Not only is over-development a problem there, as in other parts of the state, but natural disasters such as hurricanes,

earthquakes, and sea-level rise all have the potential to devastate areas of significant cultural heritage within a single lifetime. Earthquakes might not seem an obvious choice in South Carolina, but elevation shifts and sand-blows can radically alter sandy coastal plain landscapes and are devastating to historic masonry structures, as witnessed by the historic Charleston earthquake of 1886.

Add to that list of hazards the troubled economy that is cutting state and national funding to both natural and cultural heritage interests and the problems become even more acute and timely. There are no simple answers other than public and institutional vigilance to protect and preserve our heritage. Politicians share one common desire that is to keep their constituents happy, so we must all do our best to raise their awareness of these issues. Likewise, "Save-a-site, support your local archaeologist!" Your kind support of archaeological projects both here and abroad is a critical and valued resource. Thanks for your continued support!

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Fig. 2: Scholars from Russia, Japan, Peru, and the Netherlands visiting the Ocmulgee site, Georgia, in 2009. (SCIAA photo)

Special Projects

An Historical Ecology Field School at Salt River Bay National Historical Park and Ecological Preserve, St. Croix, U.S. Virgin Islands

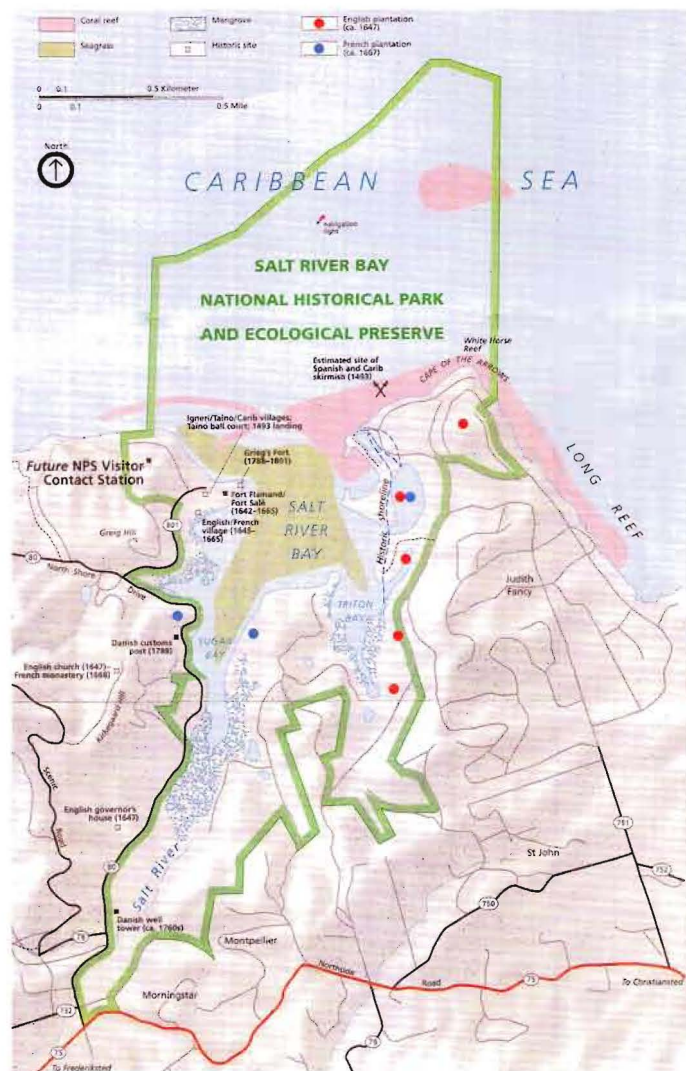
By David J. Goldstein, Ph.D., Visiting Scholar, SCIAA

The South Carolina Institute of Archaeology and Anthropology (SCIAA) will collaborate in a pilot archaeological field season in May 2011 together with the National Park Service-Salt River Bay (NPS-SARI) and the National Park Service-Southeastern Archaeological Center (NPS-SEAC). The long-term objectives are to: 1) Develop an understanding of the past 2,000+ years of human environment synergies in the Salt River Bay ecosystem on land and sea to generate a durable and lasting plan for the sustainable management of SARI resources using the following approach, 2) Map, delineate, and inventory the biological and archaeological components within NPS-SARI boundaries, completing investigations begun in 2005, and following through with biotic component management strategies, 3) Develop a strategy for recording biological and archaeological resources in the park, including the curation and custodial duties associated with past and current projects, and 4) Establish an operational field learning center that will carry out this research on a year-round basis, establishing a policy of continuance for local high school and university students, as well as mainland U.S. undergraduate and graduate students to develop trans-disciplinary investigation skills.

The immediate project aim continues to locate cultural and ecological NPS-SARI resources. The goal is to generate a holistic perspective towards park interpretation and resource development mindful of long-term human and biological synergies that occurred at the park over a 2,000+-year period. Through the frame of resource protection and stabilization, students, staff and local residents can

actively valorize the island's past through scientific exploration, archeological excavation and analysis, artifact curation, plant and animal identification, and ecosystem study. This initial stage trains students in archaeological and biological conservation practices through a field school in the following aspects of cultural/biological resource management: site and park boundary survey, ecosystem component and boundary survey, and endangered site stabilization. Resources from the University of South Carolina (USC) and the University of the Virgin Islands (UVI) Marine and

Environmental Sciences Departments, SCIAA's terrestrial and underwater archaeological divisions, and NPS-SEAC will be used to assess potential climate change impacts to the archeological, biological, and cultural heritage of the Virgin Islands. Students will be trained directly, through participating faculty and staff instruction, to utilize the information derived from these resources to develop



Map of Salt River Bay National Historical and Ecological Park. (Courtesy National Park Service)

adaptive stabilization and conservation management strategies. The long-term project goals will provide curation, laboratory, and housing facilities for staff and students, student stipends for some of the participants, and materials and supplies for data collection, resource management, and collections development and long-term storage.

Background

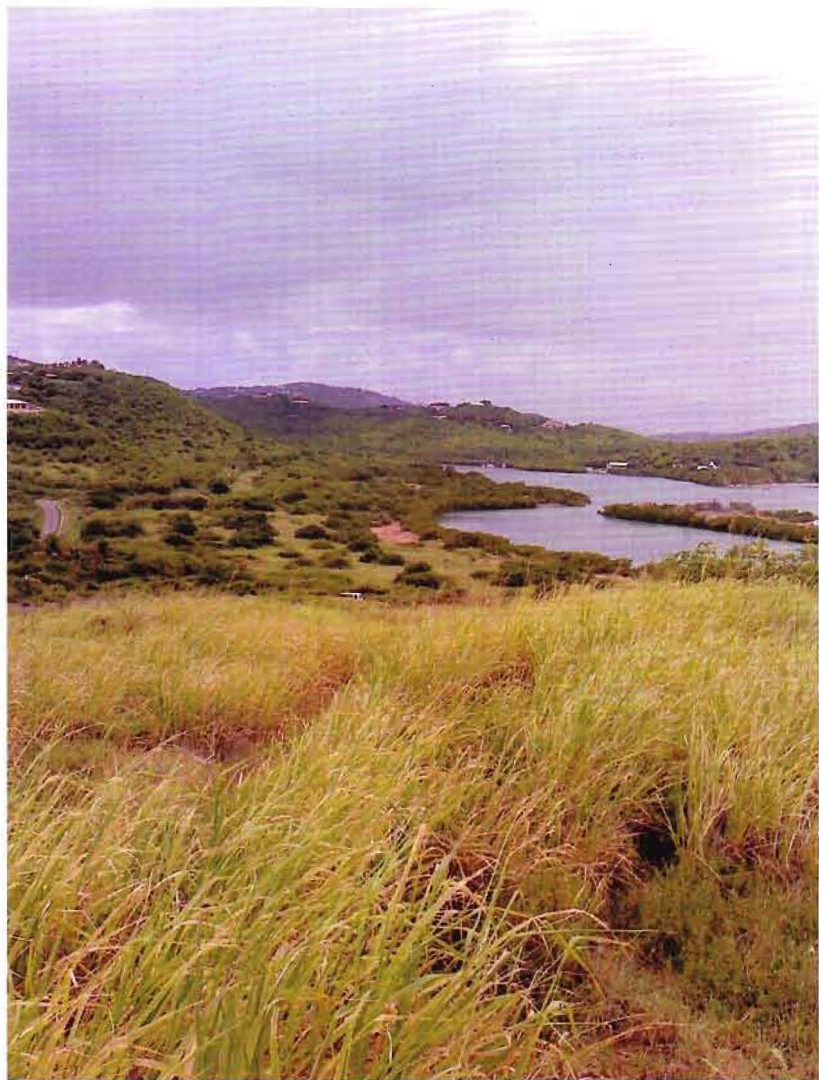
Salt River Bay National Historical Park and Ecological Preserve was created in 1992, to preserve, protect, and interpret nationally significant natural, historical, and cultural resources. The park, co-managed with the Government of the Virgin Islands, is one of only a few co-managed parks in the NPS. The park's main focus is a major indigenous ceremonial center that was the first Western landfall of Christopher Columbus' second voyage. The park includes 1,015-acres land and water, and was created to preserve, protect, and interpret internationally significant natural, historical, and cultural resources. The site is an International Union for the Conservation of Nature (IUCN) category IV habitat protection site; a biological area where active management ensures the survival of species particular to the site. Salt River Bay contains extensive prehistoric and colonial-era archeological sites and ruins in association with a dynamic tropical ecosystem spanning at least 2,000 years of occupation. NPS owns 225 land acres in the park and in 2002, the park was expanded to incorporate a private home and land, which became the SARI Visitor Contact Station, and land acquisition continues adjacent to park boundaries. The visitor contact station was dedicated in 2003, and opened to the public in 2004. Salt River Bay National Historical Park and Ecological Preserve, as viewed from the Visitor Contact Station, encompasses a variety of high energy ecosystem interfaces; estuarine bay, coral reefs, sea grass beds, deep near shore undersea canyon, and largest remaining mangrove forest in St. Croix. In this relatively small area, with a variety of human occupation phases, park visitors can experience firsthand the challenges met and solutions derived by different human social groups as well as plant and animal communities while straining to sustain life in the islands. The crown jewel of these intersecting historical and biological communities is the landing site of Christopher Columbus' second voyage at the site of the St. Croix's major

indigenous ceremonial center of 1493. The five-acre area owned and managed by the Government of the Virgin Islands is where the Old and New Worlds met for the second time, making a lasting impact on both human societies and biological communities worldwide. This location is the one of very few biological and heritage sites of this significance on United States or Virgin Island Territorial lands.

People first arrived to Salt River Bay as early as 200 B.C.-A.D. 400. Amerindian farmers and fishers traveled between islands in large dugout canoes, moving stone tools and ornaments, pottery, and probably food and other goods with their

on St. Croix, and a stone-lined ball court was present at Salt River point. By this point a significantly intensive farming system was added to long standing subsistence traditions, e.g., variety of Circum-Caribbean perennial and annual and maritime hunting and gathering.

The arrival of Christopher Columbus at the site in 1493 placed the location firmly on the map of the New and Old World frontier both culturally and ecologically. European explorers and settlers took little interest in St. Croix until the first half of the 17th century. The Dutch were likely the first Europeans to establish a settlement at Salt River. In 1642, the



A landscape of St. Croix. (Photo courtesy of David Goldstein)

neighbors and across the Caribbean basin. These communities were largely practicing locally derived horticultural technology as well as fishing, hunting, and gathering. By ca. A.D. 1,000, chiefdoms were established

French established Fort Salé—originally known as Fort Flamand—was completed, and is one of the few remaining earthwork fortifications in the Caribbean. During the Danish colonial era, 1733-1917, Salt

River Bay was used primarily for sugar cane plantation agriculture. The major biological impact attendant to the dramatic shift in social inequality and industrial capacity that developed throughout this period was the import and exchange of a variety of New and Old World plants and animals. With this, St. Croix's ecology became further globalized and fragmented between native and non-native species.

Presently NPS and SARI resources, together with SEAC and UVI have developed two critical dataset baselines for cultural and biological resources. First, recent NPS and SEAC cultural resource documents make possible both educational outreach and resource stabilization plans; this includes an Archeological Overview and Assessment that compiles archeological and other archival research summarizes archeological research throughout the Salt River watershed. This material included a SEAC 2005 investigation of SARI Hemer's Peninsula pre-historic archeological site, which located sealed prehistoric deposits suggesting that presence of a prehistoric human settlement from ca A.D. 500-900. This site has

the potential to reveal information about the biological and ecosystem resources utilized and maintained by a community in SARI watershed prior to massive immigrations occurring some 400 years later, and followed directly by European contact. Most archaeological sites on St. Croix that could have provided as much information about prehistoric life, human and otherwise, on the island have now been destroyed by development.

Second, pollen cores taken around the island as part of the UVI collaboration with Eckerd College and the NPS native vegetation stabilization plan, offer the potential for setting long-term vegetation

sequence data for comparison with the archaeological and historical data, and the contemporary landscape. Data derived from these cores are currently used to set management goals and stabilization plans on Buck Island, St. Croix, and are used to assess vegetation test plots at SARI. The potential with these data, when compared with the excavated materials is to develop an understanding of human dynamic alterations of the St. Croix landscape immediate to the modern SARI site and develop a sequence of ecosystem change.

2011 Field Project Prospectus:

SCIAA's 2011 SARI field school will collect data to assess the extent of human cultural resources within the



park boundaries, building on previously derived information. This includes an assessment of underwater as well as terrestrial resources, past and present. Modern ecological data—faunal and botanical—will be collected concurrently in survey transects following behind the cultural resource teams. These data will be used to generate resource maps that locate microclimatic variation and biogeographical niches within the park boundary. Funding for the entire program is being covered through the College of Arts and Sciences, USC, and the United States Department of the Interior.

In May and June 2011, SCIAA and the NPS will:

- 1) Establish major archaeological and historical standing features on the landscape using a series of measured transects throughout the park, concentrating on areas not covered by previous work at the site.
- 2) Catalogue and collect data on modern plant and animal distributions along these transects by placing collection areas in concert with the above survey transects.
- 3) Map all of these data using ESRI's ArchView GIS platform, and catalogue specimens in accordance with UVI Marine and Environmental Sciences Program.
- 4) Deploy students and staff into the community to collect information from

contemporary Crucians regarding how park resources are viewed and used both presently and historically.

A clear first season priority will be to focus on a protection plan for the already identified Hemer's Peninsula pre-historic site that is threatened from erosion, flooding, fire, and illegal collection and is under full protection within the

boundaries of the park. Likewise the main Columbus Landing Site on the opposite side of Salt Bay requires a protection plan. The immediate need focuses NPS, SEAC, and SCIAA personnel on developing a stabilization plan, together with students, for the Hemer's Peninsula and Columbus Landing meeting ASMIS condition assessment goals. Initially, we will collect and document the biological and ethnographic data as it pertains to these two main park areas. This strategy allows for cultural resource survey teams to begin mapping and delimiting boundaries in other parts of the park yet to be surveyed. Biological and ethnographic collection

teams can then make follow-up collections in subsequent sessions/seasons. Of critical import during the first season will be to establish point-to-point GPS data tracking for plant and animal transects, a GIS framework building on previous work in the park, and a long-term integrated relational database that can accommodate all presently curated artifacts and allows for future dataset integration both cultural and ecological.

Future Collaboration:

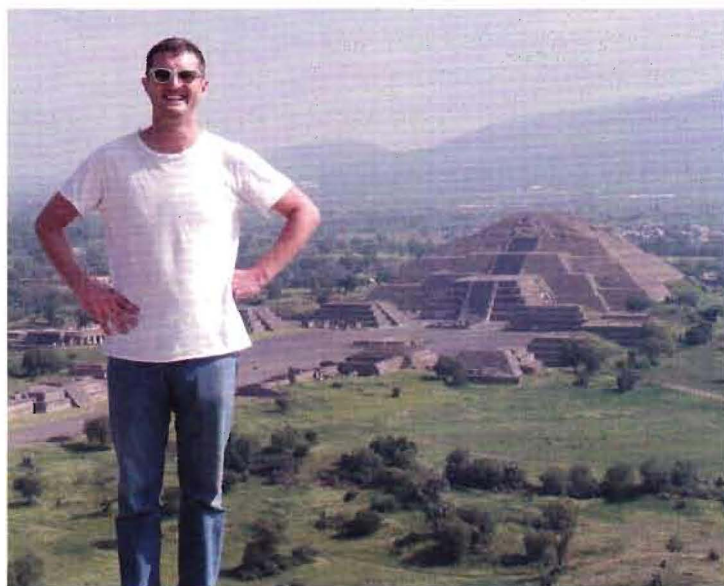
Within SARI's boundaries is the potential to develop the cultural and biological resources necessary to interpret this complex history of human and environment interaction. Set within a context of island biogeography, the park becomes a potential laboratory where anthropological and ecological approaches can be deployed. Our goal is to use SARI's cultural and ecological resources to illustrate the long-term history of ecological change throughout the human occupation of the St. Croix. Most importantly NPS staff can use the different historical periods of social development to illustrate the multiple scales at which humans can impact landscape, e.g., subsistence farming or cane plantations, and react to ecological change, e.g., trophic level impacts of hunting/gathering or extreme climate events. NPS will provide by 2016, the projected campus incept date, current information about the cultural and ecological resources in the park to aid Crucians, local students and residents, and off-island visitors in understanding the significance of the park's resources on St. Croix. NPS, SEAC, and SCIAA staff will collaborate with local territorial agency State Historic Preservation Office, UVI, and high school educators to develop regionally salient programs that emphasize skill-sets required and desired by Crucian students. In particular, programs will include data management, information and collections care, site protection, and sustainable biological resource management. NPS, SEAC, and SCIAA will focus on multi-disciplinary instructional program that trains anthropologists

in archaeological and ethnographic data collection and its integration with biological resource management and tropical ecology through federal and USC resources. The information derived through staff and student participation in the skill development programs will serve as a basis for the long-term general management and interpretive plan in advance of the projected 2016 campus opening date.

Over the next successive seasons, the SARI field school program will employ their developing resource data collection methods and data infrastructure to focus on the Section 106 needs of park development. This approach will ensure NPS compliance in advance of the campus construction project. This opportunity lets students learn the basics of Cultural Resource Management and Environmental Impact Statement generation in preparation for work in the public, private, or academic sector on and off-island. Interaction with NPS contractors and regional staff offer an unprecedented learning environment for understanding the realities of archaeological resource development and federal and territorial policy implementation. At the same time, as dataset development continues within the framework of other SARI resources, e.g., real time sea level data collection, pollen and sea sediment cores, plant and animal inventories, upper division undergraduates and graduate students may begin to develop interpretive and historical frameworks for modeling and reconstructing historical and ancient human environment synergies. Through participation with Rutgers University,

the University of South Carolina, University of North Carolina-Wilmington, and the University of the Virgin Islands, students will be encouraged to take on and use these datasets to develop original research and long-term career trajectories in park management, resource management, archaeological research, and sustainability.

SARI's resources are a time capsule of human and natural activities. They are a reservoir for examining long-term historical trajectories of interactions between island ecosystems, indigenous societies, colonial entities, global systems, and the Earth's fluctuating climate régimes. We aim to make these data available to park officials, professional researchers, participating students, and the general public to teach applied resource management skills, and develop a sound long-range management strategy. This framework uniquely integrates education with real-world and real-time problems of cultural and ecological resource management-service learning, in line with the missions of all participating institutions. The project is novel in its scope and places the future of one of the most important historical sites in the NPS in local and professional hands with hopes that it will receive the protection and support deserving of its overall significance in human history.



David Goldstein at Teotihuacan near Mexico City, (Photo courtesy of David Goldstein)

Archaeological Research Trust (ART)

Archaeological Research Trust (ART) Grants For 2011

By Nena Powell Rice

The Board of Trustees of the Archaeological Research Trust (ART) made decisions at the November 2010 meeting to fund six SCIAA archaeologists for the year 2011. A total of \$32,389 was given to support the following researchers and projects. Several SCIAA researchers initiated their search and analysis on their projects in early January 2011.

Site Formation and Site Chronology in the South Carolina Sandhills: Archaeology and Geomorphology at 38RD841/842/844, Fort Jackson, South Carolina

Audrey Dawson received \$4,000 for the analysis of four soil samples by a dating method called optically stimulated luminescence (OSL). Obtaining OSL dates for samples collected from sites 38RD841/842/844 will provide significant data for understanding Middle Holocene (10,000-4,000 B.C.) life in the Carolina Sandhills. The dates will also provide knowledge on site formation processes and the geochronology of the physical landscape. Knowing the rate of sediment accretion and the period of landform stability can be used to explore climate changes occurring in this geologically and ecologically unique area through time.

Search for Columbia's Two Civil War Prison Camps

Chester DePratter received \$5,850 to locate and document two Civil War prison camps in Columbia—Camp Asylum and Camp Sorghum. The *precise* locations of these two camps are not known. Camp Asylum is located on the grounds of the State Mental Health Hospital with a given description of "the brick wall surrounding the prison and the location of that compound relative to the nearby 19th century structures." Camp Sorghum is possibly located on the Riverbanks

Zoo property or nearby privately owned properties. Archaeologists Chester DePratter and James Legg have initiated a metal detecting survey, looking for a limited array of metal items the prisoners may have left behind, such as uniform buttons, metal cooking pots, pocket knives, and coins. (See page 20 in this issue of *Legacy* for preliminary results.)

Sourcing Two Types of Metavolcanic Stone Raw Materials in South Carolina

Albert Goodyear and Christopher Young received \$7,700 to collect samples of a well-known source of metavolcanic rhyolite from Morrow Mountain, located near Ashboro, North Carolina, to be prepared for petrographic analysis. Petrographic analysis will provide a baseline signature for the Morrow Mountain rhyolite and will demonstrate how the location of possible other rhyolite sources relate to the settlement-subsistence patterns for Early Archaic (10,000-8,000 B.C.) hunter-gatherers at the Kolb site in Darlington County, South Carolina. Once the petrographic analysis is completed, samples will be selected for X-Ray Fluorescence and for Neodymium Isotopic analysis to help determine the source of the cobbles and artifacts at the Kolb site. With this new set of data, the results will determine more *precisely* the chemical signature of Morrow Mountain rhyolite, and its accurate

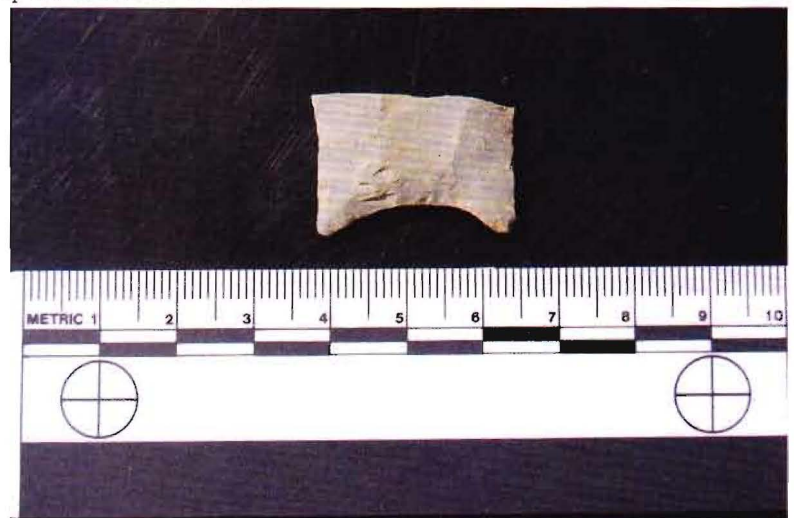
recognition will help archaeological colleagues understand the source and use of rhyolite represented at the Kolb site. This will help resolve the question(s): Is the Morrow Mountain-looking rhyolite we see in South Carolina, especially at the Kolb site, coming from North Carolina, or is there another source, such as the Pee Dee River gravels being used?

The Archaeological Definition of the Hanging Rock Battlefield

James Legg received \$3,130 to initiate a systematic, archaeological metal detector survey of several areas where Revolutionary War battle artifacts have been recovered at Hanging Rock in Kershaw County, S.C. He will confirm and characterize the battlefield components. A reconnaissance metal detector survey will be conducted across the adjacent battlefield vicinity, and he will also analyze new and existing collections in the local communities of Kershaw County, SC.

AMS Radiocarbon Dating of Archaeological Occupations at Flamingo Bay (38AK469)

Christopher Moore received \$4,760 to be used to produce a series of Acceleratory Mass Spectrometry (AMS)



Clovis base recovered during the 2010 excavations at Flamingo Bay. (Photo by Christopher Moore)

radiocarbon dates for Flamingo Bay (38AK469). Specifically, samples will be selected to test the general geochronology of the site provided by OSL dating. In contrast, to OSL dating, which provides a site formation geochronology (i.e., time of burial) for the site, radiocarbon dating has potential to date periods of archaeological occupation(s) buried within the bay sand rim of Flamingo Bay. Radiocarbon dates will also act as a test of OSL dates already obtained and will clarify both the age of occupation(s) and the reliability of luminescence dating in shallow sandy sites such as Carolina Bay sand rims. Samples for radiocarbon dating will also be selected based on the position of temporally diagnostic artifacts and archaeological features. These include probable Early and Middle Archaic (8,000-4,000 B.C) diagnostic points and features as well as charred hickory nut samples associated with a buried Clovis point base recovered during the 2010 excavations at Flamingo Bay.

Columbia During the Civil War

Steven D. Smith received \$6,949 to begin project development and to identify future donor funding in preparation for an American Battlefield Protection, National Park Service, grant that was received to research and map General William T. Sherman's march through South Carolina at the end of the Civil War. This project began in December 2010 and will support other efforts within the state to begin the sesquicentennial commemoration of the American Civil War.

All of the above projects will result in articles that will be published in future issues of *Legacy*. If anyone is interested in seeing the full background description of the proposals, please contact Nena Powell Rice (nrice@sc.edu).

The SCIAA staff thank the Archaeological Research Trust Board for their thoughtful and serious consideration in selecting the ART Grant recipients in 2011.

Public Lecture and 37th Annual Conference on South Carolina Archaeology, April 8-9, 2011

By Christopher Judge, Program Chair and Local Arrangements

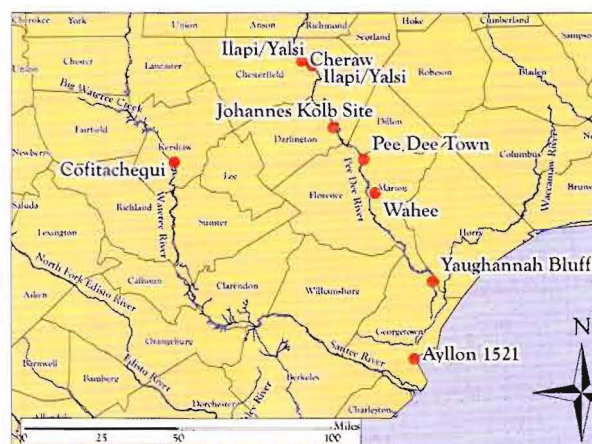
The 37th Annual Conference on South Carolina Archaeology is sponsored by the Archaeological Society of South Carolina (ASSC) and the USC Department of Anthropology and will be held on Saturday, April 9, 2011 in Gambrell Hall Auditorium, Room 153, at 8:30 AM-6 PM. On Friday, April 8, 2011, Dr. Carolyn Dillian, Coastal Carolina University, will give a public lecture in Gambrell Hall Auditorium, Room 153, at the University of South Carolina Columbia campus at 3:30-5 PM. The title of the colloquium is, "X-Ray Fluorescence (XRF) Applications in Archaeology." The lecture is free and open to the public. There will be an informal gather at the Hunter Gatherer on South Main immediately following the colloquium.

X-ray fluorescence is an analytical technique used to determine the elemental composition of objects. In archaeology, it has wide-reaching applications for the characterization of lithics, ceramics, metals, and other materials, often with the goal of determining provenance.

Biography

Dr. Dillian is an Assistant Professor of Archaeology in the Department of History at Coastal Carolina University. Her work has included many years of field excavations in the United States and in Kenya.

At Coastal Carolina University, Dr. Dillian is teaching courses on human origins, archaeology, Cultural Resources Management, field and laboratory methods, and North American prehistory. She is also Director of CCU's Prehistoric Archaeological Field School and is a member of the research faculty of the



Koobi For a Field School in Kenya.

Dr. Dillian received her Ph.D. in Anthropology from the University of California Berkeley. She holds M.S. and B.A. degrees in Anthropology from the University of Pennsylvania. She is a member of the Register of Professional Archaeologists.

On Saturday, April 9, 2011, registration will begin at 8:30 AM. Take time to view several poster exhibits in the lobby. Christopher Judge is the Program Chair. A special focus of the Great Pee Dee River Valley will be major focus of this year's conference as it will compliment the theme of 2011 South Carolina Archaeology Month poster. There will a full range of topics presented on current archaeological research in South Carolina. Christopher Judge will be Keynote Speaker this year on "Fifteen Years of Archaeology and Public Education at the Johannes Kolb Site." Please visit the ASSC website www.assc.net, for a full listing of the papers to be presented.

Lunch will be on your own. The ASSC Annual Business Meeting and Awards will take place at 12:40-1:10 following lunch. Please contact Christopher Judge if you have any questions about the conference, Registration for the conference is \$10 (\$5/ students/seniors) and can be paid at the door.

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2nd Annual ART Gala, The Palmetto Club, Columbia, SC, February 26, 2011. (Left to right): ART Member Dorothy Kendall, ART Past-Chair Ed Kendall, ART Member Walter Wilkinson, ART Member Patricia Moore-Pastides and President Harris Pastides (Photo by Nena Powell Rice)

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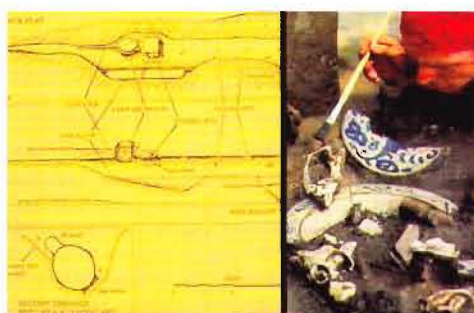
By Nena Powell Rice and Charles Cobb



We would like to update you on the exciting fundraising activities of the Archaeological Research Trust (ART) Board in support of the SC Institute of Archaeology and Anthropology (SCIAA). We continue to press ahead in our efforts to increase funding and support for the archaeological research of SCIAA archaeologists.

In the spirit of furthering the fundraising activities of SCIAA, The Edward and Dorothy Kendall Family Foundation contributed up to \$80,000 in the past two years, and matched other gifts up to \$15,000. We thank Ed for his service as Chair and Dorothy as a member of the ART Board during the past two years.

Please join us in this effort, which with your help, will substantially add to the ART Endowment in 2011. This will provide funding in perpetuity to current and future archaeological research projects through SCIAA.



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- **Rock Art and Collectors Survey** in the Piedmont of South Carolina
- **Le Prince**—a 1577 French corsair shipwreck in Port Royal Sound near Beaufort, S.C.
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- **Underwater Survey of Childsburry**—an early colonial town on the Cooper River near Charleston, S.C.
- **Establishment of Underwater Shipwreck Trails** in the Cooper and Ashley Rivers near Charleston, S.C.
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